BUTANE-PROPANE News

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APRIL, 1949—50c per Copy

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High strength steels make possible this rema able, light-weight cylinder—the Hackney 100A. It's light weight—approximately 70 lb but at the same time it's tough and rugged, able to meet rigorous regulation requireme and user needs.

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MADE WITH PRESSURE CAST ALUMINUM ALLOY CASE

Look what these Little meters can do for you!

Especially designed for measuring LP-gas from bottle gas sets, storage tanks and distribution system. Small, simple, safe and sure! Economical and easy to repair since entire working mechanism is replaceable as a unit with ordinary tools. These *little* meters effect many distribution economies, really identify you with the gas business. Get full details now. Write for bulletin 1163.

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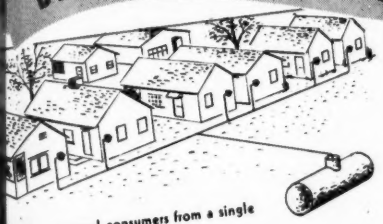
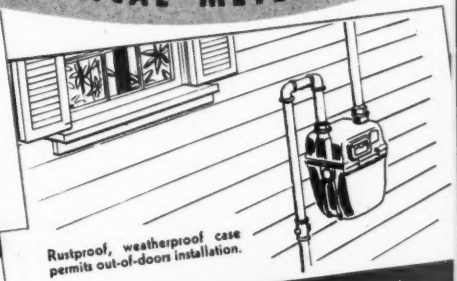
PITTSBURGH 8, PA.

Atlanta Boston Chicago Houston Kansas City Los Angeles
New York Pittsburgh San Francisco Seattle Tulsa

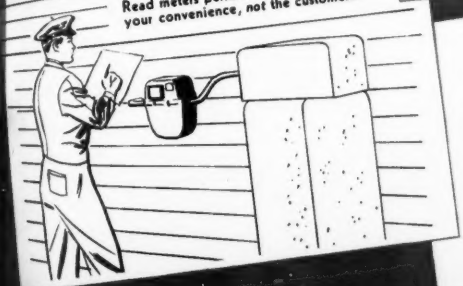
BLUEPRINTS OF ECONOMICAL METERING



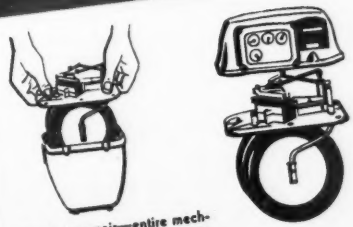
Serve several consumers from a single tank.



Rustproof, weatherproof case permits out-of-doors installation.



Read meters periodically, fill tanks at your convenience, not the customers.



Simple to repair—entire mechanism lifts from case for economical replacement and repair.

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LETTERS

• **BUTANE-PROPANE** *News* **welcomes letters from our readers, but it must be understood that this magazine does not necessarily concur in opinions expressed by them.—Editor.**

Gentlemen:

I have a problem using 100 lb. propane cylinders on a manifold system of 16 cylinders on a side.

There are 35 burners to be on the pipeline, using around 6800 cu. ft. of propane per 8 hour day at 15 to 20 lbs. propane pressure at the manifold controls.

I would like your recommendations as to size of pipeline, outlet to be ½ in. Also, if the manifold system is large enough.

Winter temperature-low of about 5°. Summer temperature high of about 90°.

R. S. G.

Ohio

We believe 16 cylinders will be sufficient to take care of your local requirements at temperatures as low as 5°F and still be able to practically empty the cylinders without dropping below 15 psi downstream pressure.

We do not know the length of your distribution line but suggest that you use 1½ in. to 2 in. pipe, not due to pressure drop as much as to provide a resevoir of gas to take care of peak loading.

This line should be equipped with some type of safety relief valve or bursting disc with the discharge piped to a safe location to take care of a failure of the regulators. The selection of regulators should be done by someone familiar with industrial installations to insure satisfactory service.—Ed.

•

Gentlemen:

Our company has always pursued the policy, when called upon to convert a natural gas range to propane gas, of removing the natural gas orifice and inserting therein a propane gas orifice. An appliance store here which is a branch of a national organization of stores receives many stoves of the natural gas type which has the needle valve adjustment.

One of our competitors has been making the hook-ups for this appliance store and has merely screwed up the needle valve adjustment. We have contended that such procedure will not make for permanent, efficient operation of the stove.

Furthermore, we wonder if a stove so handled would then be AGA approved. We have bought out the competitor who has been making the off-color conversions referred to above. Now the appliance store wonders why we can't make the needle valve adjustment instead of a conversion job for which we must charge them.

Naturally, we want to do the job right, yet at the same time we would like to keep this appliance store hook-up business. What I want to ask is: first, do you approve of a screw valve adjustment for conversion of natural gas range to propane gas range; second, would the stove then be AGA approved?

J. M. H.

Kentucky

You are correct in your contention that the use of the proper size orifice is the correct way to change over a natural gas stove for use with propane.

AGA approval is for a specific gas and a change in the appliance results in non-compliance with the purpose stated in the approval.

Most stove manufacturers build models that are AGA-approved for LP-Gas and each can

furnish you with the information and parts to make a change in a natural gas model.

Have you discussed the possibility of carrying LP-Gas approved appliances with the manager of the chain store? Most of the large ones are now doing this.—Ed.

•

Gentlemen:

At the moment we are working with a coal gas/water gas-mixture of about 450 Btu/cf. and a specific of 0.6 to 0.7.

We consider to install in our factories the apparatus necessary for a propane-air mixture and we should like to hear from you, which mixture you can recommend us, in order to approximate the qualities of combustion of the gas, now delivered, as close as possible.

J. S.

The Netherlands

Your problem is one that cannot be answered in a simple letter. A number of small manufactured gas plants in the United States have been changed over to operate on propane-air mixtures with satisfaction. These plants vary from 550 Btu per cubic foot to 1450 Btu per cubic foot in the selection of the mixture delivered.

The 550 Btu mixture was used in the early changeovers in order to approximate the manufactured gas originally delivered. Due to the low Btu content of the mixture, some difficulty is experienced in burner adjustment and this mixture is much more sensitive to changes in quality than the richer mixtures.

There are many phases of economics involved in such a changeover and it is entirely possible that the use of a higher Btu mixture will be more satisfactory in the long run, even though some appliance changes and adjustments would be necessary when first making the change.

In a number of cases it has been more economical to substitute undiluted propane gas due to the simplicity of plant and the increasing of capacity of the distribution system by delivering a high Btu gas.

We would hesitate to make a recommendation to you as to the best mixture to use without a thorough study of your problem.—Ed.

•

Gentlemen:

We wish that you would give us a correct answer to the manner of measuring propane fuel which will be fair both to the seller and purchaser.

In our particular problem we are buying our propane fuel in transport, rather than tank car loads.

We contend that weight is the only fair basis and the transport company and refinery say that measurement is correct since they take density, temperature and space into consideration.

We contend that temperature and space should figure out the same since it would not make any difference if the gas were in a gas or liquid state; however, it would make a great difference if the volume were considered by a liquid level gauge because of the expanding of the liquid in hot weather.

G. L. T.

Indiana

The entire matter of keeping inventory and checking losses is one of great importance to the liquefied petroleum gas industry and an easy solution has not been found.

Weighing is the most accurate but presents difficulties of a practical nature and involves possible freight charges on "empty" returned cars or trucks.

Some of the producers are now billing by weight but most of them use liquid gallonage. A very close approximation can be made if all readings are corrected to a base figure of 60°F. This can be accomplished by determining the liquid level, the gravity and the temperature and correcting to 60° from the tables in the "Handbook Butane-Propane Gases."

In checking the delivery in the receiving tank, temperatures must be taken before and after receipt of the cargo and corrections made to 60° on the original amount on hand and the final amount in the tank, the difference being the net gallons delivered at 60°.

There is bound to be some error due to the change in density of the vapors above the liquid level in the tank with changes in pressure.

It is to be remembered that considerable gas will return to the refinery in the tank truck if the pressure is not reduced by use of a compressor. This can amount to several per cent depending upon the pressure.

When weighing is used, care should be taken to see that correction is made for the difference in weight of the fuel in the truck's fuel

tanks, check for addition of spare tires, chains or other equipment that can be a variable factor.—Ed.

•

Gentlemen:

Please send any information you may have on operating a brick kiln on propane.

Can you tell us the number of cubic feet required per 1000 brick?

C. N. K.

Idaho

The fuel consumption for brick kilns is high and usually the economics of brick making depend upon a relatively cheap source of fuel supply.

We do not have specific information on heat required, but would estimate it to be from two to four million Btu per 1000 bricks.—Ed.

•

Gentlemen:

We have a machinist in this locality who wishes to convert a "Kewanee" boiler for super-heated steam to use for propane storage tank.

The boiler is made of ⅜ in. riveted steel plate. The pressure that it can withstand is greater than what propane gas tanks are designed for.

He plans to fit this tank with "Rego" fittings all the way through.

We have two questions regarding this situation:

(1) Do you believe that this boiler can be converted successfully?

(2) Who must pass inspection on it before it can be used? Will a licensed boiler inspector do?

R. G. S.

Illinois

The National Board of Fire Underwriters and most of the state regulations require that containers used for LP-Gas be constructed in accordance with the ASME or API-ASME Code for Unfired Pressure Vessels. The pressure requirements and the safety valve requirements are definitely set out in these orders.

Any conversion of a boiler shell for LP-Gas service would require that the work be done by a shop that is qualified by either the ASME or the API to do this work and the tests will have to be made in the presence of a certified boiler inspector.

We do not recommend the use of riveted vessels for liquefied petroleum gas service due to the fact that tight closure depends upon caulking.—Ed.

•

Gentlemen:

We are interested in converting coal furnaces, both warm air and hot water, to propane gas.

Can you give us comparative efficiency on propane at 15c and bituminous coal at $15?

We would appreciate address of some concern that has a rating book on furnaces.

L. A. V.

Tennessee

We suggest that you get in touch with advertisers in BUTANE-PROPANE *News* for conversion burners who will have data on the burner requirements for various types of boilers and heaters.

The relative cost of operation of a furnace using propane versus coal will be dependent upon the type of coal burner and the general design of the furnace and the continuity of operation.

At 15 cents per gallon, LP-Gas may run higher than coal at $15 per ton on a direct fuel cost comparison, but if your loads are intermittent, gas heat could compete based, on the incidental saving in time, bother, dirt, and maintenance occurring in the use of coal against automatic gas operation.

"The Bottled Gas Manual," Chapter 18, published by us, gives various competitive figures on coal and LP-Gas.—Ed.

"CP" is the unbiased Buying Guide to the top profit gas range lines.

FEATURE "CP" models and you'll make more money in *any kind of market.* "CP" gives women what they want . . . and it's backed by the biggest brand names in the gas range business—the top profit lines that put dollars in your pocket.

NEW BIG gas industry promotions continue to drive home to women everywhere that GAS has got it with "CP"... the most modern automatic features—cooler, cleaner kitchens—better, easier, more *economical* cooking.

FIND OUT *today* how your manufacturer can help you to tie-in with the gas industry's hard hitting "CP" promotion . . . and get the extra sales and profits "CP" offers YOU.

Gas Appliance Manufacturers Association 60 East 42nd Street, New York 17, N.Y.

COMMENT

THE Federal Government may be presumed to be taking an interest in the liquefied petroleum gas industry at last.

This will take the form of a census planned to show who and where dealers and distributors are, total amount of their sales of appliances and fuel, number of employes, and other more or less personal questions.

This provision for canvassing the LP-Gas industry has been added to the regular business census which the Government makes annually. If it is comprehensive, it will reveal a picture of our industry that has never been available before.

•

Distributors of electrical merchandise are making much of a Montana survey instigated by a state farm paper (possibly with an electrical urge in its back) which purported to show a farmer preference for electric appliances.

The survey may or may not have been fairly made, but anyway, it offers arresting reading for LP-Gas men. If true, Montana dealers have a job ahead of them to reverse the situation.

Sometimes salesmen work better when they have hot competition than if it lags. Well, here's your chance.

A summary of the Montana survey, as projected to all state farm families from a 2000-family sample, shows "that 11.1% or 4,190, are planning to purchase electric ranges in the future; 17.1%, or 6,455, plan to buy electric motors; 17.4%, or 6,565, electric refrigerators; 11.7%, or 4,416, washing machines; 16.5%, or 6,228, food freezers; 4.4%, or 1,661, ironers; 9.5%, or 3,586, hand irons; 7.4%, or 2,756, waffle irons; 11.1%, or 4,190, toasters; 13.6%, or 5,134, food mixers; 3.8%, or 1,434, electric fences; 7%, or 2,642, vacuum cleaners; 10.8%, or 4,007, electric water heaters.

"However, as in other farm and rural areas, there is a competitive side to Montana's bright farm electrification picture: a number of Montana farmers are planning to purchase LP-Gas appliances. For comparative purposes — 7%, or 2,642 farmers, are desirous of buying an LP-Gas range; 6%, or 2,265, a gas refrigerator, and 3.8%, or 1,434, a gas water heater for household purposes."

What can happen in Montana can happen elsewhere—unless LP-Gas dealers show a good brand of salesmanship.

•

Selling, promotion, advertising and home demonstrations are again the order of the day. Several constructive articles upon these subjects appear in the following pages.

•

You can again talk more liberal terms to your prospective customers.

A March 7 amendment to Regulation W permits a down payment of 15% on purchases of all controlled goods, other than automobiles, and 21 months to pay off on goods valued at more than $50.

By Ed.

close harmony...

There is always *close harmony* in the friendly, helpful business relationships of the Sid Richardson Gasoline Co.

We work harmoniously with the buyers of our L-P Gas, supplying their requirements under a new purchase plan in which they assist in establishing their own gas costs. If you'll call, wire or write, we'll be glad to give you the interesting facts about this purchase plan.

Sid Richardson
GASOLINE CO.

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

BEYOND THE MAINS

THE Compressed Gas Association has undertaken an important assignment, in representing the LP-Gas industry and related industries of the United States and Canada at a meeting of the International Standards Organization in London toward the end of April. International standards on gas cylinders, valve connections, valve outlets, and valve inlets will be considered.

Ironing out of details will aid the industry in its development internationally. It can lead to equipment made in different countries being interchangeable, with resulting benefits to all countries concerned.

•

Good luck to Robert Borden, who comes to the LPGA for promotional work, after nearly 20 years with Commonwealth Edison of Chicago.

•

Hit hard, but be smart about where and how you hit. That's the way to lick the electric competition. And it's well to remember the thought of Col. Ellsworth L. Mills about how Mr. Dewey came out with the rather superior level on which he waged his campaign last November against a real fighter.

•

Bermuda today is a bottled gas paradise. With 35,000 population, it's figured there is 75 per cent saturation of potential business. Kerosene used to be principal fuel for cooking. Bottled gas came there a while before the recent war, but its sale has taken a very substantial jump since.

Some of the gas used is shipped in bottles filled in this country, and sent to Bermuda by ship; and the balance is bottled in Bermuda from three 30,000-gallon tanks.

Bermuda traditions create unusual problems. Although the regime in which motor vehicles were virtually unknown (and bicycles and carriages the main reliance) was ended by the war, a 20-mile-an-hour speed limit still prevails. A service man starting out on a motor bike for a far corner of the island on a hurry-up call is held to this. Cylinders are hauled both on motor trucks and on carts with horses.

Big hotels are substantial customers. Business is limited mostly to cooking, water heating, refrigeration. There's virtually no industry in Bermuda, but bottled gas serves a famous marine laboratory.

•

Recent items indicate the rail car shortage is much less acute, but that our railroad friends are anxious to keep production of cars going, under steel allocation, at an equally fast or faster rate. Why can't some other industries cut in on just a little bit of this?

One cannot but note with interest the reported stepping up of the electric industry's public relations program. Yet they haven't been able to do anything about recent publicity on the lobster cooking situation.

It seems radar, the latest near-challenge to gas both beyond and on the mains, in a few parts of the commercial cooking field, has its disadvantages for lobster cooking. This is according to Robert Jahrling, lobster king of Springfield, Mass.

We're told some chains of hamburger stands, which also tried radar, are sour on it and back in the gas field.

•

An orchid to Suburban Propane Gas Corp. for its practical booklet "City Comfort Has Moved to the Suburbs" which tells excitingly in words and pictures the story of comforts of hot water; of a beautiful work-saving kitchen; and of silent, economical, dependable gas refrigeration—all possible with LP-Gas.

•

Evidence accumulates of money being spent by those strange bedfellows, the electric industry and the government, to boost electric appliances against those consuming LP-Gas or gas from the mains. Our product is unquestionably best, and a lot of those falling for the electric line doubtless one of these days will wish they had not gone so far down that trail. But plenty of selling and plenty of industry cooperation are needed right now to beat this competition.

Clyde T. Ellis, executive manager of the National Rural Electric Cooperative Assn., has announced a drive, with the aid of the government's Rural Electrification Administration, to bring electric service to nearly 2,000,000 rural families.

Westinghouse Electric Corp. plans to increase unit production of appliances 20% this year, and the appliance division has adopted a 1949 advertising budget of more than $11,000,000.

•

Further indication of what the electrical industry is up to is had from the Edison Electric Institute starting a tremendous sales promotion and advertising drive to seize appliance business and load which could belong to gas, hoping possibly to boost their kilowatt-hour sales by 165,000,000,000 a year.

Crosley Division of Avco Manufacturing Corp. which makes refrigerators, expected to increase its combined sales, promotion and advertising staffs by 300% by spring.

The Rural Electrification Administration has granted one of the largest loans in its history to finance a $75,590,000 power line project to bring low-cost electricity to 65,000 rural consumers in most of South Carolina.

Ed Titus

Fundamentals of Liquid Transfer *Using LP-Gas Compressors*

BUTANE and propane can be transferred from one container to another by gravity, by the use of a liquid pump, or by the use of a compressor.

The gravity and pumping methods of transferring liquids are familiar to most of us due to the number of liquids such as water, oil, gasoline and other products that are moved by these means.

The transfer of liquid by compression of vapors is more novel as certain special conditions must exist to make it economically practical. Due to their inherent characteristics and the type of storage containers used in their handling, LP-Gases fall into the class of materials that can be transferred by the compression method and often with considerable success.

There are, however, some limitations as to the use of compressors and care should be taken in the design of the piping and the selection of equipment. It will be the purpose of this article to explain the fundamentals of this method of transfer and outline in some detail the possible applications and the benefits that may be derived and the limitations of use.

For purposes of illustration, take two tanks and connect them together at the bottom with a liquid line and on the top with a vapor line.

The liquid in the two tanks, even though they may be of different diameters, will seek the same level in each tank as long as the vapor spaces are interconnected. This is true of any liquid and in the case of water and other non-vaporizing liquids, the vapor line can be dispensed with as long as the tanks are vented to atmosphere.

To cause a flow from one tank to another, a pump can be installed in the liquid line or the liquid levels can be changed by an increase in the pressure over the liquid in one tank or the combination of an increase in pressure in one tank and a decrease in pressure in the other tank.

How much pressure is required to change the liquid level in the tanks?

For an example, assume tanks contain water and that one tank is 4 ft. in diameter and the other is 8 ft. in diameter. At the start each tank has a liquid load of 4 ft. It is desired to transfer the liquid

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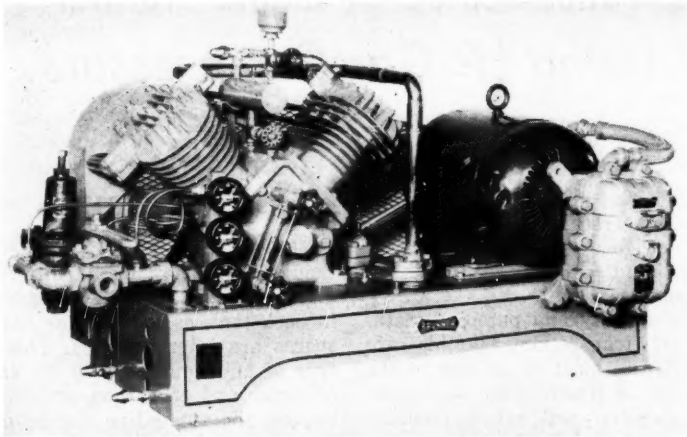
By HAROLD W. WICKSTROM
Technical Editor, BUTANE-PROPANE News.



The compressor of Brunner Manufacturing Co., Utica, N. Y.

from the 4-ft. tank to the 8-ft. tank.

Assuming the amount of liquid in the first tank when transferred will raise the liquid level in the other tank 2 ft., the final difference in levels will be 6 ft.

Since one foot of water exerts a pressure of .433 lbs. per square inch, the pressure that will have to be applied to the first tank will be $6 \times .433 = 2.598$ psi. As long as this pressure is held on the tank, the liquid level will remain at 6 ft. in the other tank. If the pressure is relieved, the water will run back through the connecting pipe and the levels will equalize.

Simple Transfer of Propane

To emphasize the problems that can be anticipated in the handling of propane by the use of a compressor, take the instance of a plant with a spur track at an elevation 10 ft. lower than the storage tanks.

Assume the temperature of the propane in the storage tank is 50°F with a tank pressure of 77.1 psi. The car of propane arrives with a temperature of 80°F and a pressure of 128.1 psi.

It is desired to empty the 10,000-gal. car at the rate of 50 gal. per minute. With a rate of 50 gal. per minute, the pressure drop through a 2-in. transfer line 100 ft. long will be about 1.0 psi. (See Page 320, Handbook Butane - Propane Gases.) Allow 5 to 6 psi additional for friction in the hoses, valves, fittings, etc., which will make about 7 psi.

The difference in elevation of 10 ft. equals 10 x .433 x .5 = 2.175 psi, say 2.5 or a total of 9.5 psi difference in pressure required to unload at a 50 gpm rate.

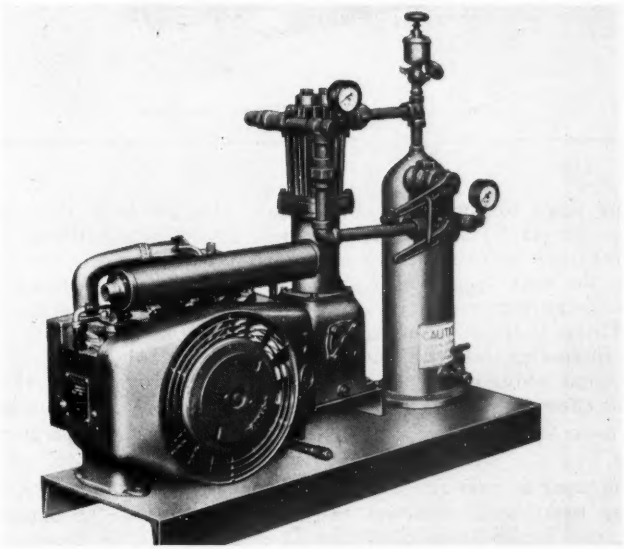
As the car has a pressure of 128.1 psi, flow will start when the liquid lines are opened and continue at the required rate or faster until the difference in pressure between the tank car and the storage tank approaches 9.5 psi. This pressure equalizes rather rapidly due to compression on the vapors in the receiving tank and the expansion of the vapors in the tank car.

If a compressor is installed in the vapor line taking suction from the vapor space and discharging into the tank car, flow will be continued.

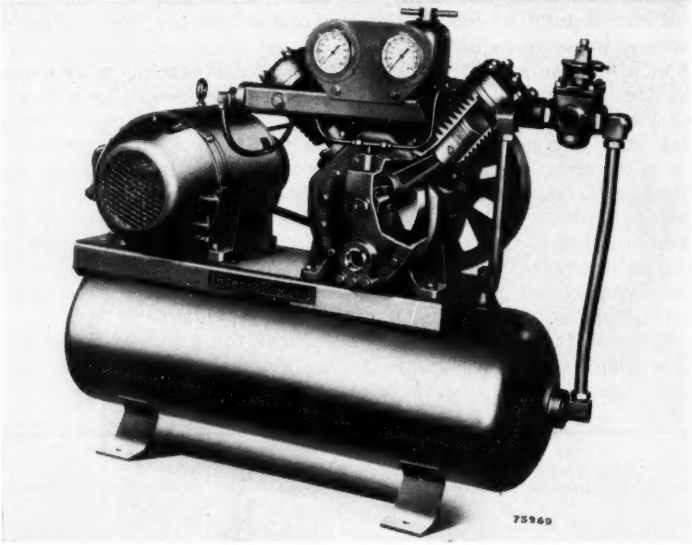
Take for example a compressor with a displacement of 12.0 cu. ft. per minute operated by a 5 hp motor. With an 83% volumetric efficiency this unit will pump about 10 cu. ft. per minute.

Such a unit can transfer liquid at a rate of 50 to 70 gals. per minute. The reason for this apparently high transfer rate is a combination of several things.

First, the action of the compressor pulling vapors from the receiv-



The compressor of Corken's, Inc., Oklahoma City.



The compressor of Ingersoll-Rand, New York.

ing tank tends to lower the pressure on the tank and the compressed vapors increase the pressure on the tank from which the liquid is being removed.

In addition to the effect of reducing an increasing pressure due to removal and addition of gas, considerable effect in pressure changes on the tanks is due to temperature changes.

As the vapor is removed from the receiving tank liquid must boil to replace the vapor removed. This boiling of the liquid requires heat which can only be supplied through the shell of the tank. Depending on outside weather conditions it is entirely possible for the temperature of the liquid to be reduced 10° to 15°, resulting in an additional drop in pressure in the tank.

Conversely, when the vapors go through the compressor they are heated considerably due to heat of compression. This temperature rise may run as high as 40° to 50°F. When the hot vapors enter the tank they tend to raise the temperature of the contents. In practice it is found that an overall temperature difference of 35° to 40°F can be

maintained between the discharge tank and the recovery tank, which is sufficient to cause a pressure drop across the system for fast transfer of the liquid.

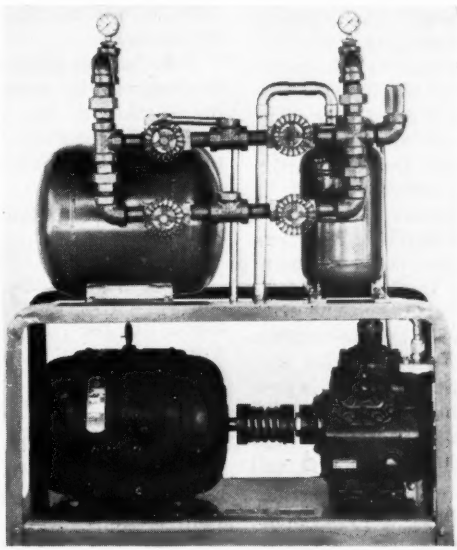
All of these factors vary considerably with the liquid handled, size of tanks, climatic conditions, and piping arrangements.

The limitations of the compressor transfer method are most pronounced in the handling of the heavier products such as butane.

This is due to the fact that there are possible climatic conditions that will cause condensation of the compressed vapors, which will limit the differential pressure that can be obtained.

Take the case of handling normal butane when the atmospheric temperature is 30°F. The pressure on the storage tank will be just a little below atmospheric.

The compressor will handle 10 cu. ft. per minute. By checking the properties of normal butane (Table 4, Page 27, Handbook Butane-Propane Gases), it will be noted that at 30°F, a cubic foot of butane weighs only .169 lbs. Ten cu. ft. per minute will only be 1.69 lbs. per minute with a latent heat of 165.7 Btu per pound.



The compressor of L. C. Roney, Inc., Los Angeles.

HAROLD W. WICKSTROM

This amounts to less than 21,000 Btu per hour to be removed from the recovery tank. This is not sufficient to make a material reduction in pressure due to reduction of temperature.

Also this amount of heat is not sufficient to increase the temperature of the discharging tank. The heat of compression is dissipated to the atmosphere through the piping and tank shell due to the large difference between the compressed gas temperatures and the atmosphere and the condensing ability of the butane vapors at the lower temperatures. Even if a 15° temperature difference could be maintained between the two tanks by insulation or other means, the pressure differential of butane between 30°F and 45°F is only 5.2 psi, which would not be sufficient to produce the flow anticipated.

Propane, however, at 30°F has a density of .625 lbs. per cu. ft. and a latent heat of 163.4 Btu per pound which is 61,200 Btu per hour, or three times as much heat as developed by pumping the butane vapors.

Likewise, a 15° temperature difference will produce a pressure differential of 19.3 psi, sufficient to produce the flow required.

The compressor has another important function in the bulk plant. After the liquid contents of a tank car or truck have been transferred to the receiving tank, the delivery tank contains residual vapors.

The amount of these vapors will be the cubic foot capacity of the tank. The liquid content of these vapors will vary materially with variation in pressure.

A 10,000-gal. car has a vapor capacity of about 1500 cu. ft. of vapor. At 100°F the pressure of the vapors in a propane delivery would be 187 psig — containing 1.69 lbs. per cu. ft., or 2550 lbs., or 600 gals.

A large part of these vapors can be economically recovered by taking suction of the vapors in the car by the compressor and forcing them into the receiving tank.

Pipe Discharge Line to Bottom

Due to the heat put into the vapors by compression, the discharge line should be piped into the bottom of the receiving tank or if it is a top connection, should be extended to a point near the bottom so the vapors will be condensed by contact with the liquid and not build up a layer of superheated vapors above the liquid surface with a consequential increase in tank pressure, which will increase the time required and the power used to pump out the car.

This, however, requires an extra

TABLE 1. Liquid Content of Residual Vapors in Tank Car at Various Pressures and Temperatures for Butane and Propane

Temp. °F	*Butane* Pressure (psig)	Gallons	*Propane* Pressure (psig)	Gallons
20	0	39	41	163
40	3	59	63	222
60	11	82	92	291
80	22	111	128	380
100	37	151	172	468
120	55	197	225	592

connection in the tank as this line cannot be used for a vapor return line.

There is an economic point that can be reached when the time and power required to remove the vapors no longer justifies the running of the compressor. This is due to the factor that as the pressure is reduced in the car, the vapors gradually get leaner; that is, carry less pounds per cubic foot, and the difference between the pressure on the car and the receiving tank becomes greater, requiring more power to move a given weight.

Assuming the vapor capacity of a car to be 1468 cu. ft., Table 1 is taken from the April, 1945, issue of BUTANE-PROPANE *News*.

To obtain the liquid residual of any other size tank divide the size of the tank in cubic feet by 1468 and multiply by the gallon figures in the above columns.

For the plant that has a liquid pumping system already installed, a vapor compressor can be used to increase the speed of liquid transfer especially if the suction piping to the pumps is restricted or the liquid head is not sufficient.

The additional pressure exerted on the surface of the liquid has a tendency to collapse vapors that form in the suction line and the intake of the pump allowing the pump to operate on liquid rather than a combination of liquid and vapor, often resulting in considerable increase in rate and reduction in pump maintenance.

For Cylinder Filling, Too

The compressor can also be used for cylinder filling by use of a throwover valve at the cylinder filling manifold.

By throwing the valve so the compressor evacuates the cylinders, the temperature and pressure in the cylinders will be reduced and allow flow of liquid into the cylinders, due to the higher pressure of the liquid in the storage tank. The use of the throwover valve two or three times during the fill-

ing is usually sufficient to completely fill the cylinders.

Due to the nature of the gases being handled, compressors for this work should be obtained from manufacturers who have specialized in the design of units for LP-Gas.

The proper appurtenances to the compressor and the installation are as important as the machine and motor itself.

Provision should be made for condensate receivers and a means to remove the condensate. The introduction of liquid into the compressor cylinders can cause mechanical damage.

The compressor has a place in the LP-Gas bulk plant and the economics of its use can be determined by balancing the cost of delivered product and the amounts allowed to return to the refinery against the interest or investment on the equipment and the cost of power consumed.

NGAA Drops LP-Gas Odorization Specifications

Mandatory odorization of liquefied petroleum gases by the manufacturer will no longer be required under the specifications of the Natural Gasoline Assn. of America, according to a recent announcement by NGAA secretary, William F. Lowe.

Long an integral part of official LPG specifications promulgated by the association in 1931, the provision requiring the manufacturer to introduce an odorizing agent into the products previous to shipping has now been dropped.

One of the principal reasons for the move was said to be the diversified use for liquefied petroleum gases for industrial uses. Originally these products were largely used for domestic purposes but in recent year the demand from industry for relatively pure grades has grown to large proportions.

Industrial uses are as raw materials or in processing of other products and the presence of an odorant makes the gases undesirable. These increased demands of industry for unstenched material prompted the NGAA board to make the introduction of an odorant optional with the manufacturer in accordance with buyer's demands.

Underground Propane Storage To Get Trial in Texas Field

First attempt at underground storage of gas in the Southwest is planned for the Carthage field in Panola county, Texas.

The attempt will be made by Chicago Corp., Corpus Christi, a Carthage developer. Plan calls for the storing of propane gas manufactured at the company's gasoline plant in the field.

It is believed this would be the first such storage of that type gas. In Michigan, natural gas piped from the Southwest is stored underground in an abandoned oil field.

The company proposed to make the storage attempt in the Paluxy sand horizon at around 3,300 feet. Permits have been requested for four input wells five miles west of the Carthage townsite.

If subsequent experiments with this well prove the plan feasible, the other wells will be drilled and the storage plan attempted.

The gas would be injected into the sand zone under pressure and kept there until needed.

Gas Powers a Heat Pump

THE Gas-Marvair, a new development of considerable interest to both the gas utility and the liquefied petroleum gas industries, was on display at the AGA convention in Atlantic City last fall. It was in actual operation in Convention Hall, with propane as a fuel.

In order to supply the reader with more detailed information about its significance, BUTANE-PROPANE *News* has obtained the story of the Gas-Marvair from the manufacturer, Muncie Gear Works Inc., of Muncie, Ind.

The Gas-Marvair is described as a gas-powered, automatic air conditioning plant in a compact unit, which can be installed in a basement, utility room or garage. In addition to use in homes, it can serve for stores, beauty parlors, cocktail lounges and similar commercial establishments. Basically, mechanics are those of the ordinary household refrigerator unit.

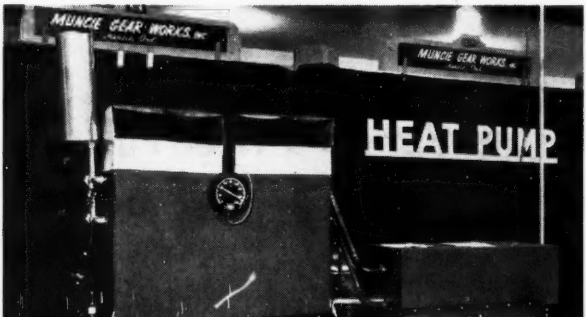
With the Gas-Marvair, gas provides the energy for driving the unit. Aside from this, the unit is exactly the same as the electrically driven Marvair, now in operation all over the country. Neither gas nor electricity is used entirely as a fuel for the direct production of heat. One or the other is used to power the unit, which brings heat up from the earth.

The manufacturer states that the Gas-Marvair furnishes heating at a cost of less than 50% that of conventional gas heat. Since gas is a moderately priced form of basic energy, the Gas-Marvair is said to furnish cooling at a considerable

GROWING CONTROVERSY has centered about the so-called "heat pump" as in recent months its fame has begun to spread. Many skeptics believe it still impractical, others predict its installation cost will be prohibitive. BUTANE-PROPANE *News* does not wish to take issue with these viewpoints, nor does it necessarily subscribe to them. It does believe, however, that its editorial pages would be incomplete if it ignored an application of gas that is new (and revolutionary, despite the fact that the principles of its operation are as old as the mechanical refrigerator).

This expository article will serve as an introduction to the first announced gas-fired heat pump, the Marvair. Herein is presented only the manufacturer's story of his product's performance. As the device is still in the experimental stage, the author made no attempt to obtain actual operating data.

The editors believe that, at this time, the real significance of the gas-fired heat pump is that it may serve as the gas industry's answer to the electrical industry. This type of air conditioning system in the past has, to the best of our knowledge, been considered the protege of electricity. It is evident from this story, however, that gas in this application can do everything electricity can do. Whether either one will make serious inroads on the types of air conditioning now considered "conventional" remains to be seen.—Editor.



The Gas-Marvair heat pump as it appeared in operation at the GAMA exhibit in Atlantic City.

saving in most areas. From the point of view of the gas utility, the Gas-Marvair, according to the manufacturer, affords a means of reducing peak requirements on heating and provides a summer load. It is said to cut the peaks and fill the valleys.

The Gas-Marvair, it is claimed, is adapted to producing comfortable temperatures the year around in homes, offices, or small commercial buildings. Heat or cool air, as needed, is produced and circulated through convenient forced air ducts. Changeover to heating or cooling is accomplished by means of controls furnished with the unit. The Gas-Marvair filters the air to reduce dust and dirt and provides moisture control.

There are four basic components of the Marvair: the energy source; the refrigeration system, or means whereby the earth's heat is delivered to the air distribution system in the winter, or taken from the air distribution system and delivered to the earth system in the summer; the heat source, which takes heat from the earth in winter and delivers heat to the earth in summer; and the air distribution system, which delivers the heat or cool air wherever it is required.

The Gas-Marvair uses a quiet gas engine as the source of mechanical energy driving its compressor. By combining heat from the earth with heat recovered from the exhaust

gases and water jackets, performance is obtained using a moderately priced form of basic energy. By the application of certain acoustical techniques, the noise level of the engine is reduced below that of the ordinary circulating fan or oil burner.

Device Adaptable To Any System

The device can be adapted to any type of heat source system. When sufficient water supply is available, direct use of water furnishes the simplest and most economical system. When sufficient water is not available, the many types of ground systems should be investigated to determine the one most economical and satisfactory. Developments in improved heat source systems and the variation in local conditions make it necessary to consider the best procedure for each locality.

The company publishes a U.S. Geological Survey map showing ground temperatures throughout the United States for approximate water temperatures at 30 to 60 ft. For wells of greater depth, one degree is added for every 64 ft. For shallower depths, earth temperatures vary seasonally and reflect mean air temperatures.

In the winter the Gas-Marvair takes heat from the earth and delivers it to the hot air system. In the summer it takes heat from the air being cooled and dehumidified and returns it to the earth. Any type of cooling system must provide means of dissipating the heat taken from the air being cooled, and the Gas-Marvair uses this same system as a heat source when operating on the heating cycle.

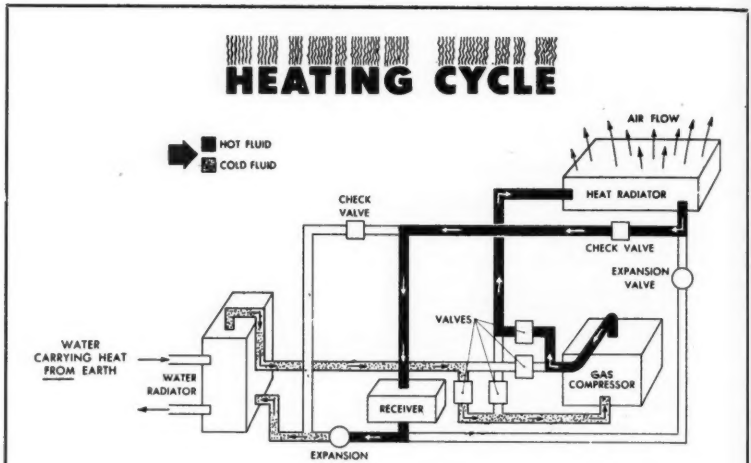
The Marvair refrigeration circuit consists fundamentally of four elements, a compressor, an air radiator, an expansion valve and a water radiator.

On the heating cycle, the compressor pulls low pressure gas from the water radiator, raises the pressure and temperature of the gas, and passes it on to the air radia-

TABLE 1. COSTS OF HEATING WITH GAS-MARVAIR COMPARED WITH OTHER TYPES

	Unit Cost	Furnace Efficiency	Net Cost per therm
Coal (12,000 Btu/lb.)	$15.00 per ton	50%	$0.125
Oil (150,000 Btu/gal.)	.15 per gal	70%	0.143
Gas (1000 Btu/cu. ft.)	1.00 per Mcf	70%	0.143
*Gas-Marvair (1000 Btu/cu. ft.)	1.00 per Mcf	....	.06

* Laboratory tested.


HEATING CYCLE
HOT FLUID
COLD FLUID
AIR FLOW
HEAT RADIATOR
CHECK VALVE
CHECK VALVE
EXPANSION VALVE
VALVES
WATER CARRYING HEAT FROM EARTH
WATER RADIATOR
GAS COMPRESSOR
RECEIVER
EXPANSION VALVE

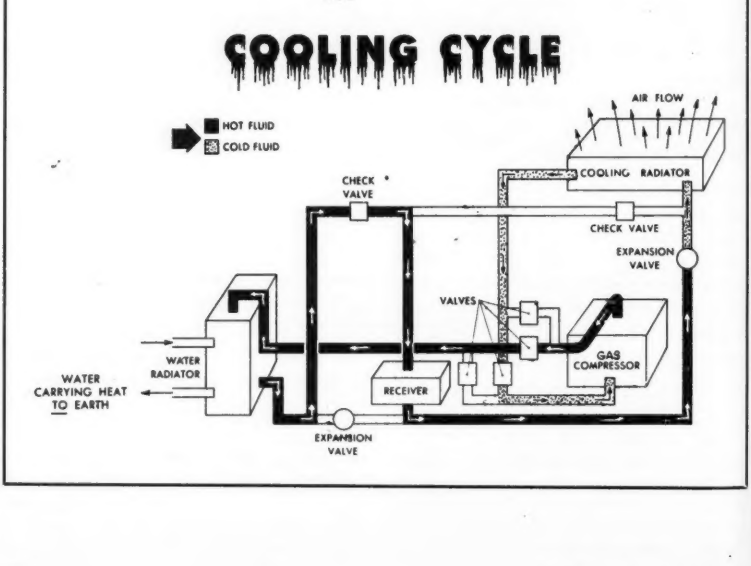

COOLING CYCLE
HOT FLUID
COLD FLUID
AIR FLOW
COOLING RADIATOR
CHECK VALVE
CHECK VALVE
EXPANSION VALVE
VALVES
WATER RADIATOR
WATER CARRYING HEAT TO EARTH
GAS COMPRESSOR
RECEIVER
EXPANSION VALVE

TABLE 2. CAPACITIES OF GAS-MARVAIR

Heating Cycle

1. Btu delivery (total)	160,000	200,000
2. Btu from water	77,000	96,250
3. Btu input (natural gas)	90,400	116,000
4. Engine speed	1300 rpm	1500 rpm
5. Compressor speed	700 rpm	808 rpm
6. Head pressure	165 lb.	175 lb.
7. Suction pressure	25 lb.	25 lb.
8. Plenum temperature	120° F	130° F
9. Return air temp.	70° F	70° F
10. Fan capacity	3150 cfm	3150 cfm
11. Water flow	1000 gph	1000 gph
12. Water inlet temp.	50° F	50° F

Cooling Cycle—Capacity 7½ to 10 ton.

tor. Here the heat is given up to the air as it passes over the radiator. In giving up this heat, the refrigerant vapor is condensed to a liquid, and passes back to a receiver or storage tank. As heat is required, this high pressure liquid is passed through an expansion valve into the water radiator where it is vaporized. In so doing, it picks up new heat from the water and continues its path around the refrigerant circuit.

To Cool, Reverse

When cooling is required, the path of the refrigerant is reversed, and the hot refrigerant vapor is passed to the water radiator and the air radiator is used to vaporize the refrigerant gas.

The Marvair uses the conventional air duct system to transport the air to and from the space to be conditioned. A motor driven fan used in connection with the compressor unit provides a quiet means of transporting air to and from rooms. When the unit operates on the heating cycle, the air to be conditioned flows over the air radiator where its temperature is increased.

When the room temperature exceeds that necessary for comfort, the unit is converted to the cooling cycle. Then the air is cooled as it passes over the coils. At the same time, moisture is condensed out if the humidity is too high.

The Marvair is equipped with thermostatic year 'round control.

Comparative costs of heating using common basic energy sources, in delivered cost per therm (100,000 Btu), as quoted by the company are shown in Table 1.

Performance data are given in Table 2 for the Gas-Marvair, using natural gas, manufactured gas and bottled gas. The capacities obtained by this unit on long test runs are listed there.

Pioneers Had to Learn How to Pioneer

MANY a G.I., returning to a busy America after World War II, looked with interest upon the rapidly expanding liquefied petroleum gas industry as a business field worthy of consideration, and many entered that field, successfully establishing themselves in rural areas throughout the country.

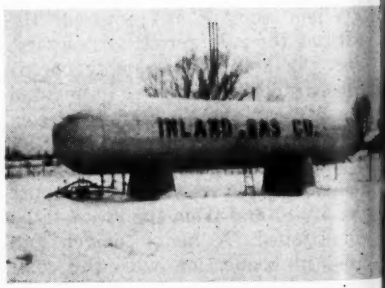
A good example of what was done in this manner is illustrated in the development of what is now the Inland Gas Co., Salt Lake City, Utah.

Three returning army veterans, with varying backgrounds of experience, decided to form a partnership to engage in wholesale and retail distribution of LP-Gas in the northern half of Utah. They were L. Marshall Haines, John W. Haines, his brother, and A. L. Nowels. None had any previous experience in the LP-Gas industry.

L. M. Haines had been associated for 20 years with Standard Oil Co. of California and with the California Co. in California and Montana; Mr. Nowels was experienced in wholesale merchandising in Utah and the Pacific Coast states; J. W. Haines' business experience was mainly in the financial field in the East. But they had the will to learn and to work.

And this is what John Haines says about the adventures of this group of neophytes in building a gas load in a comparatively new field:

"During the summer of 1946,



OPPOSITE PAGE: Scenes at filling plant and bulk station of Inland Gas Co., Salt Lake City. RIGHT: the home office and the 20,000 gal. storage tank.

land for a plant site was secured in South Salt Lake, immediately adjacent to Salt Lake City; a railroad spur was installed; and the construction of the plant buildings was started in August. A few sales and installations were made during the fall and winter.

"In December, 1947, a branch was opened at Logan, in northern Utah, with Dean H. Hale as manager. By degrees, a 20,000-gal. bulk tank, tank car unloading stem, and cylinder-fill rack were installed by the Ransome Co. In May, 1947, the first car of gas from Calor Gas Co. was pumped into the tank.

Experience Was Expensive

"The usual difficulties and experiences of the green and optimistic uninitiated, complicated by the recent war and its immediate aftermath, were encountered. Shortages, rising prices and freight rates, and opening of an untried territory, all combined to supply rather expensive experience in large doses.

"Utah lacked any vestige of a state regulation or regulatory body concerned with the installation, transportation, or safety of LP-Gas; the state tax laws, written without thought or knowledge of LP-Gas for home use, proved cumbersome and involved; lack of well-trained service personnel was a problem.

"The partnership organization proved inadequate, and in March, 1948, the Inland Gas Co. was incorporated, with L. M. Haines as president, A. L. Nowels as vice president, and J. W. Haines as secretary-treasurer. Shortly thereafter, Mr. Nowels relinquished active participation in the management of the business, retaining his office as vice president and a stockholder.

"By employing proved methods of handling gas and making customer installations, as preached by publications of the NBFU, LPGA, BUTANE-PROPANE *News*, and Lon Turner, and paying attention to the advice of heads older and wiser in the gas business (L. J. Thatcher, of Northwest Butane Gas Co., Pocatello, Idaho, being especially helpful), the firm has shown a steady growth on a sound basis.

"The gas load has grown to a fairly well-balanced 30,000 to 40-000 gal. a month, and all hands have continued to learn more about their particular jobs — the hard way.

Had to Educate the Natives

"The bulk and cylinder loads are about even, and bottle dealers in the more remote regions of the state have been successful. Gradually the population of Utah, no easier to teach new habits of living than the average farmer of any other part of the country, is becoming better educated to the advantages of LP-Gas, and even the handicap of high freight rates from California, while an obstacle to building up a heating load, have not been insurmountable.

"Satisfied customers (and this satisfaction has been expensive to the company due to repeated service calls, necessitated by initially

untrained servicemen and customers on the average entirely unfamiliar with any sort of gas and apprehensive as to its 'dangers') have proved to be the firm's best advertising. Word-of-mouth recommendation has been Inland's most fertile source of business, and doubtless will continue so to be."

Marshall Haines has been elected vice president of the newly formed Utah Liquefied Petroleum Gas Assn., and that promising young organization appears to be an important answer to two more of the company's problems: the taxation question and safety regulations in Utah. They will require more education of people unfamiliar with LP-Gas, but the task should not be impossible in the opinion of Mr. Haines.

Minnesota Dealer Solves Tank Handling Problem

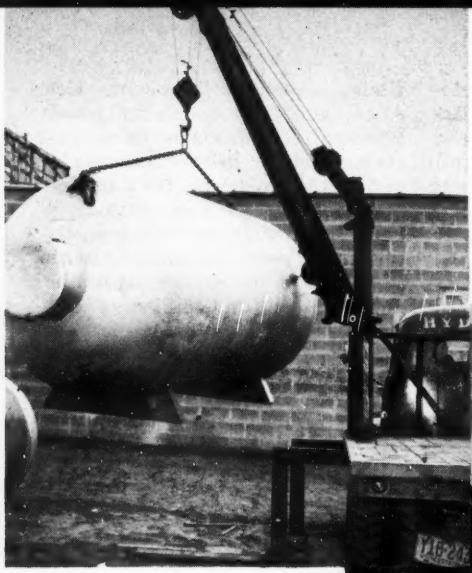
THE handling of large tanks has, in the past, been a problem for the Northwest Hydrogas Co. of New Brighton, Minn. It represented money in the form of lost man-hours and in delays in customer service to unload and store tanks by hand. Attempts to use trailers were not successful because of the special requirements of company operations.

So the Bubar brothers, George and Charles, decided to do something about it. Putting their heads together, they designed a power winch, mast and boom which could be mounted on a truck, and powerful enough to handle big loads with ease and flexible enough to meet the many requirements of loading and unloading—from gondola rail cars to storage and from storage to consumers' premises. By mounting on the side of the truck, the rig does not interfere with other uses of the truck.

The total height of the winch and mast is 9 ft. 10 in. above the truck bed. Tanks of 1000-gal. capacity can be handled by one man in a few minutes. With the winch and boom under easy and perfect control, tanks can be lifted and lowered without injuring them in the slightest.

Last year the Bubar boys made another departure in routine dealer operations by installing a mobile radio-telephone service on their tank trucks and service cars to

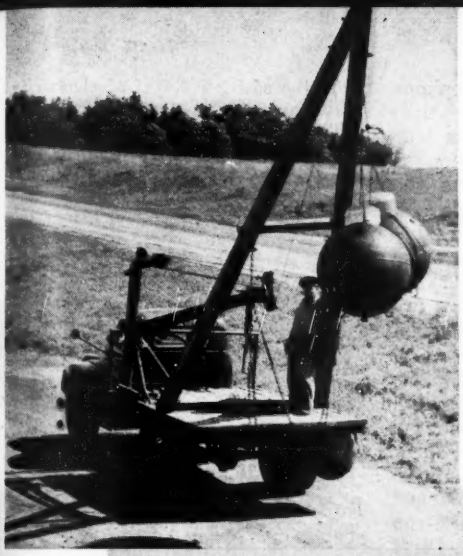
Handling Tanks with Power Winch



ABOVE: A 1000 gal. tank being loaded. The 2 doglegs on the side are used to keep the truck on an even keel. This size tank can be loaded by one man in few minutes.

RIGHT: Another view of 115-gal. tanks being unloaded.

LEFT : Unloading gal. tanks from a road car after a tanks have been rem



LEFT: The tanks being unloaded here are of 115 gal. capacity.

BELOW: The rig on the front end is used only with 1000 gal. tanks and could be eliminated entirely by using a longer wheel based truck. The "A" frame was made out of two 6x8's, 20 ft. long.

RIGHT: This truck is in a driving, or road, position. The power winch can be noted just behind the cab. Total height is 9 ft., 10 in.

provide for home-office telephone contact with drivers after they leave the plant. This system was installed under the supervision of Northwestern Bell Telephone Co. and has proved a great time and money saver to the company because it enables drivers to make deliveries of fuel to customers on their daily routes when orders are received after the drivers leave in the mornings.

The Northwest Hydrogas Co. has lately been putting on a campaign among its customers and prospective customers to purchase only appliances that are designed by the factories for use with liquefied petroleum gas and to make no appliance purchase without first consulting the company to be certain that supply lines are adequate in size and the installations conform to accepted practices.

New Cost Comparison Chart Shows Competitive Fuel Prices

A new pocket device is now on the market to give dealers a means of making a quick, accurate price comparison between cooking and water heating with LP-Gas and its competitive fuel, electricity.

It is called the "Perrygraf" and is available through the Liquefied Petroleum Gas Assn. at 11 So. La Salle St., Chicago.

To association members the price is 50 cents each in lots of 10. Nonmembers must pay an additional 10 cents each in the same quantity orders. Large orders are slightly less.

This is a "slide rule" type of selling aid whereon the slide is set at a selected price of LP-Gas by pound or gallon and an adjacent scale shows what the cost per KWH of electricity would have to be to compete.

The cooking comparison is on one side and the water heating on the other. The authority for the comparisons is stated on the device and is quoted from Leaflet No. 191 of the U. S. Department of Agriculture.

The whole "Perrygraf" is 3 inches wide, 7 inches long, and 1/16 inch thick. It is heavily lacquered to withstand long service and can conveniently be carried in the pocket. The scale is worked to allow for an adequate margin of accuracy in respect to the type or types of fuel in use.

June Safety Issue Will Raise Industry Standards

"Safety" should be the most important word in the vocabulary of every individual connected with the distribution of butane and propane. Upon the safe operation of bulk plants, trucks and equipment depends a dealer's success and reputation. Upon freedom of accidents by users depends the reputation of the fuel and the industry.

To better acquaint distributors and their employes with sound, safe practices and to aid them in creating nonhazardous utilization of gas, BUTANE-PROPANE *News* will devote its entire June issue to the subject of safety.

This will be the second year that the June issue features safety and the 1949 edition will be a valuable reference book of operational practices that long experience has proved practical. No dealer or employe should be without it.

Subscribers will receive copies as usual. Others may purchase them for $1 per copy if ordered in advance of publication. Otherwise, the price will be $2 per copy. Address BUTANE-PROPANE *News*, 198 S. Alvarado St., Los Angeles 4.

Merchandising Appliances
What the Dealer Can do to Boost Sales

By RAY HEMINGSON
Western Representative, Beals Creative Printers, Oklahoma City, Okla.

THE LP-Gas operator is a very busy man. He has all the general business problems of securing various products and services and then selling them at a profit, keeping his help busy and happy, maintaining office, warehouse, automotive equipment, and gas utilization facilities at plant and customer locations. In addition, he has a tougher insurance problem and an increasingly difficult legislation problem, both of which are tied up closely with safety. And there are others!

It therefore is not surprising that the average operator does not reinvest the customary 2 to 4% of gross in his advertising or merchandising program. Nor keep a strict accounting of his appliance department separate and distinct from his fuel department.

Upon the maintenance of regular, sound budgeting depends good growth in normal times and decent survival in other periods. The relation of appliance service costs to the dealer, on one hand, and the service charges to customers, on the other hand, are easily determined with good accounting practice. Better selection of appliances from manufacturers is also secured.

And now with fuel costs increasing out of proportion to other fuels for one reason or another, it is apparent that the LP-Gas operator must effect economies in his operation, or boost appliance sales, or both, to maintain his profit position.

Just what do we know about this business of appliance merchandising, anyway? Our LP-Gas industry is only one of many others which will place much greater emphasis on appliance selling in 1949. It might be of value to review briefly some of the selling tools used in the 30's.

Selection of Salesmen — The selection of a salesman is of great importance. Up to this time there was no particular problem about this matter at all — you simply could not get them. But that picture is changing fast. Industry in general has developed a series of tests which will give the employer a good indication of the

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The accompany paper was prepared for delivery at the March 18 meeting of the Northwest District, LPGA, in Portland, Ore., but Mr. Hemingson was unable to give it because of being called to the East Coast on business. The facts set out, however, are of the same importance to industrymen, and hence, its publication.—Editor.

RAY HEMINGSON

prospective salesman's chances of success. In the sale of gas appliances the best known series of such tests has been developed by Servel, Inc.

The newly appointed salesman should become familiar with the duties of the installation and servicemen—gas as well as appliances—as soon as possible. Company policies should be carefully explained, complete sales portfolios provided, and competitive rates discussed and fully understood. The new salesman should plan his activity and should be subject to periodical check-up. Compensation should be on a fair basis of salary and incentive.

Salesrooms — Showrooms should be clean, well lighted and ventilated; appliances arranged attractively so that features can be shown easily and effectively; key appliances gas-connected. Do not permit servicemen to steal appliance parts from displayed appliances. Arrange a comfortable chair or two for your prospects, and give your salesman a chance to do a complete selling job. If the showroom is located on a traveled highway or street, install lights to illuminate the various appliance models during the early evening hours.

Manufacturer-Aids—Appliance manufacturers are increasing assistance to their retail outlets, including LP-Gas. This assistance includes the services of highly qualified sales and service representatives, newspaper mats, mail stuffers, showroom displays. All at little cost to the dealer. All these services should be utilized.

Mailing Pieces—Get colors and pictures into your mailing pieces. Include reply cards or coupons in your copy. Preach the gospel of economy, advantages, benefits, and leisure. Tell the folks what LP-Gas is and how it operates, and, of course, where to buy it. Don't expect too much from your mailing, which should be reenforced with personal solicitation. Have a series of mailings and follow through.

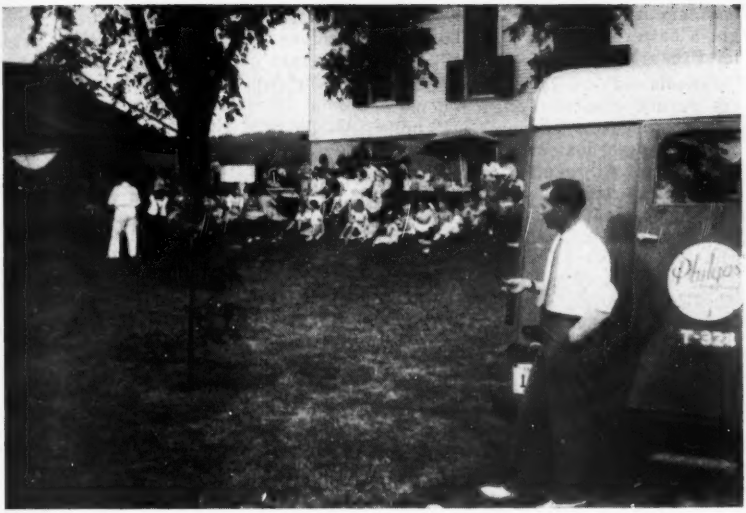
Radio — Schedule your radio program for those hours your prospects are apt to be listening. For rural folks this is usually in the early morning, at noon, or early evening. Spot announcements with sound effects rate high; also, sponsorship of news and weather forecasts.

Newspaper Mats—Have pictures in your mats and keep your copy as simple and short as possible. Get your advertisement on the society page if possible and utilize middle-of-the-week days rather than otherwise. Cartoons are effective and often get attention that straight copy does not get.

Inside Displays — These emphasize the fact that appliance selling is going on. They should whet the prospect's appetite for your merchandise and help you sign up the deal.

Inserts — Also called stuffers and throw-away pieces. Generally they tell the advantages, benefits, economy, etc., of a particular appliance. They are mailed out with bills and handed to prospects who call to see your appliances. They can be used by your service and gas delivery men to hand out to neighbors in the vicinity of their daily calls.

Manufacturers supply LP-Gas deal-



As a result of a Philgas trailer demonstration at a Gales Ferry, Conn., church picnic, Ray Hemingson made immediate sales of permanent LP-Gas installations to the church, to the pastor, and to four families—ranges, refrigerators, water heaters. Other sales followed later.

ers with many mats, inside displays, and inserts. One criticism of their material in the past has been an emphasis on particular model appliances at the expense of the general benefits and advantages. An example of this might be a water heater manufacturer whose copy dealt with fast recovery, automatic features, freedom from service, etc., instead of the luxury of hot water, its availability all hours of the day, making easier and faster the chore of dish washing, Monday wash days, etc.

New Building — Many new homes are equipped with competitive fuel facilities. Each dealer should cultivate builders in his territory and work out for them, with the assistance of the manufacturer, special builder prices on appliances. These special price programs should be backed up with demonstration installations at the building site without any charge to the builder.

Prizes and Gimmicks—The presentation of kitchen utensils to your customers as a prize for furnishing you with prospects stimulates sales of appliances and prolongs selling seasons. Small booklets with colored reproductions of useful utensils, together with letters explaining the contest, are circularized to customers. Do not run these contests too often, and qualify your customers in your letter so that you do not give but one utensil to a sale.

A gimmick is some inexpensive household gadget that permits a sales-

man making door-to-door canvass to get a better reception, like the "Fuller Brush Man."

Schools — Some range manufacturers permit domestic science departments of schools to purchase appliances through dealers at most favorable prices. At regular periods these models are replaced with the latest model. The old one is sold by the dealer, and there is no loss to him whatever. These science students become very good prospects. These school installations are usually made on a discounted basis by the LP-Gas dealer. Where appliances are sold to schools for other than teaching purposes, as well as to all charitable institutions, liberal discounts are granted. Where gas bills are rendered on a monthly or periodic basis with minimum consumption requirements, these are waived and no penalty assessed for non-usage periods.

Employes — Liberal discounts are granted to employes on fuel as well as appliance purchases. Many operators make a practice of rewarding employes who turn in leads that result in sales.

City Gas Company—Many LP-Gas dealers cooperate with city gas companies to their mutual advantage. In most cases, as far as the LP-Gas dealer is concerned, the original sale is simply a gas load and an appliance conversion. However, these jobs often lead to additional appliance sales as well as replacement sales. The alert LP-Gas dealer may sometimes cooperate in cooking schools, which result in many appliance sales.

There are many other merchandising aids that have been utilized to advantage, including trailer displays, roadside signs, decals, matches, "bird-dogs," and whatnots. Nor are those mentioned here equally applicable in all parts of the country. However, each LP-Gas appliance dealer can analyze his sales, determine which program or type of advertisement is giving him the greatest return, and then concentrate his effort and dollars in that channel.

"U" of Tulsa Short Course Scheduled for June 1-3

The LP-Gas and natural gas appliances short courses, as conducted last year, have been combined in one school this year, June 1-3, at Tulsa, Okla.

The course is being offered by the College of Petroleum Sciences and Engineering, The University of Tulsa, and sponsored by the Southern Gas Association. Dr. F. T. Gardner, professor of chemistry at the university, will again be director of the course.

Subjects and classes will be divided into two divisions, liquefied petroleum gas and natural gas. While the final program is not yet out, advanced announcements are that liquefied petroleum gas technical sections will meet each day from 10 to 12 noon and from 1 to 3 p.m. and 3 to 5 p.m. Work in each section will be offered only once.

Subjects to be included in the LP-Gas section classes will be: Automatic control subjects as listed for natural gas; burner selection and adjustment; floor furnaces; refrigeration; servicing of LP-Gas ranges and water heaters.

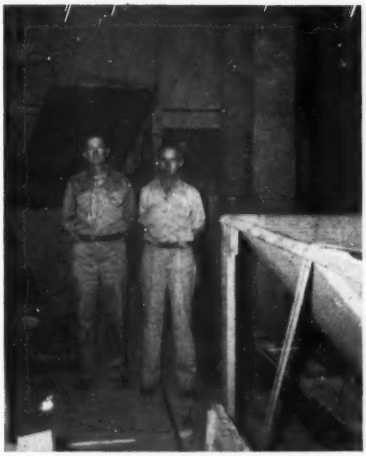
Dr. Gardner announces that each registrant who attends all of the sessions of his division will be awarded a certificate attesting that he has completed an 18-hour course in the servicing and installation of gas appliances. Papers and other material presented by instructors will be assembled after the course, bound and mailed to each registrant.

Butane Solves Farmers' Problems Of Drying and Storing Rice

By ZOE JOHNSON

A FARM rice dryer operated on butane and their own storage bins has solved the rice farming problem for Henderson and Engelkes, two young rice growers of Hamburg, Ark. They are no longer standing in line before commercial rice driers and wondering if their rice crop will be dried and either stored or sold in time to leave them free for the hunting season.

Scientific cultivation, crop rotation, forestry, and soil conservation are being understood and practiced more extensively each year in Arkansas, and a beckoning light down through the immediate years for Mr. Henderson and Mr. Engelkes is the hope of some day being able to retire, independent of social security and old age pensions with their rice fields still yielding a secure living for their children.



Henderson and Engelkes in their privately owned rice drying and storage house.

Need Home Dryers and Storage

Mr. Henderson says the most serious problem of the rice farmer today is the congestion at commercial dryers and that there is a great need for farm dryers with their farm storage bins; they are becoming almost as necessary to the rice grower as a hay barn or a corn crib is to the stockman. They are not planning to go into the drying business for other farmers in their community. If a neighbor gets in a tight place, they will help him out, but as a good neighbor gesture and not as a business expansion.

Henderson-Engelkes use two combines in harvesting their crop. Their dryer was developed by the University of Louisiana and is sold by the Mooney Manufacturing Co. of Clarksdale, Miss. The cost was about $15,000 and they expect it to pay for itself in convenience, market advantages, and the cost saved against patronizing a commercial dryer. They are both

Outside view of storage plant.

pleased and surprised at the low cost of butane operation (about 3 cents per bushel) as they can dry their rice at the farm with a saving of 80% of the cost of commercial drying. Capacity of the dryer is 2500 to 3500 bushels per day.

They are not large land owners; their combined rice acreage is only about 450 acres, but yields an average of 90 bushels to the acre. Hamburg is situated in rolling prairie land that extends on down into northern Louisiana and skirts the southern timber lands of Arkansas, where the most advanced and scientific methods of timber conservation are attracting forestry students and experts from all over the world.

Rice growing is a new industry in this section but in so short a time has grown so lustily as to make a crying need for butane farm rice dryers which will increase as more land is turned to ricelands. Only butane can make the expansion of rice growing possible in a region where other methods of drying are impossible without long, expensive hauls and time-wasting delay to the rice farmer.

Dealers in Cape Cod Area Organize for Standardization

As a result of recent safety regulations formulated by the Massachusetts State Department of Public Safety, LP-Gas dealers in the Cape Cod area of Massachusetts have organized an association. The adoption of uniform installation rules to conform with the state regulations is the main objective of the group.

Elected to administrative offices were Nathan C. Nickerson as moderator and Ralph E. Fuller, Jr., secretary. A by-law committee was selected with the following members: Alexander Pate, John J. Fay, Jr., Frank Mahaffey, Arnold Dwyer, Roy D. Brown, and Carl M. Bolles.

Florida Dealer Brings Suit To Avoid 10% Sales Tax

The city of Orlando, Fla., had a late-February lawsuit filed against it by the Natural Gas & Appliance Co., Inc. Natural Gas seeks an injunction enjoining the city from collecting a 10% tax on the bottled gas which Natural Gas sells to its customers.

Orlando's city ordinance placed in effect March, 1947, calls for a tax of 10% of the payment received by the seller of electricity, metered or bottled gas, water service, fuel oil, and telephone service. A previous complaint, filed after the city had levied an excise tax on fuel oil, was upheld by the Florida supreme court, the ordinance being ruled invalid and unenforceable.

In Natural Gas' complaint, it sets forth that it is a private corporation, sells only customers with whom it has a contractual relationship, holds no public franchise, is in competition with other liquefied petroleum gas dealers, and does not hold itself as a public utility.

Do Your Salesmen Know How to Sell?

Survey shows they don't, but there's something that can be done about it.

By LEE A. BRAND
Vice President, Empire Stove Co., Belleville, Ill.

IN a recent survey among 400 large scale LP-Gas dealers, investigators found a startling lack of sales ability among dealer employes and lack of sufficient information about LP-Gas and appliances to make good sales presentations or to combat the effects on prospects of electric sales propaganda.

The survey was made by the Empire Stove Co., Belleville, Ill., and its results were presented to the board of directors of the Liquefied Petroleum Gas Assn. in Atlanta, Ga., last month by L. A. Brand, Empire vice president, in a special report.

The great need for more sales helps for dealers is apparent from the facts brought out. Results of some of the actual investigations are detailed in the report, which follows:

To justify any recommendation made relating to special sales training courses or meetings for LP-Gas sales personnel designed to combat electric competition, it was deemed advisable that a field survey should be made to determine the conduct of LP-Gas sales personnel in the field at the present time.

Such a survey was made by and at the expense of Empire Stove Co. and was conducted in the states of Texas, Illinois, Oklahoma, Indiana, Missouri, Michigan, Minnesota, Colorado, Arkansas, Ohio and California. An effort was made to select states with strong and active LP-Gas associations, also states with weak LP-Gas associations. To be representative, the states selected were some with active and strong electric competition and others with weak electric competition.

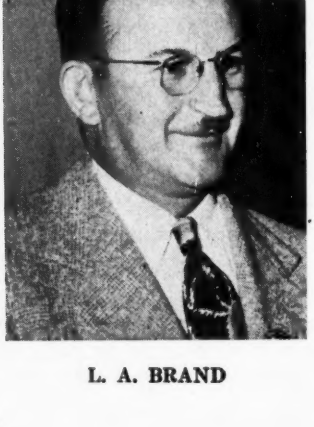
Experienced Shoppers Were Used

Experienced shoppers were employed, who actually called at the LP-Gas dealers' display rooms and made inquiry as to the advantages of LP-Gas and LP-Gas appliances.

Sometime during the conversation a statement was made that they, the shoppers, were inclined to favor electricity. The effect of this statement on the LP-Gas men was astounding. In few cases were the LP-Gas men able to give a satisfactory answer. In most cases they were tongue-tied, stammered, and had no prepared defense against this approach.

For obvious reasons, the names of those contacted are being withheld. We are, however, giving you some examples of these contacts. In submitting these examples, it is not intended to establish a basis for argument nor outright criticism of anyone. Rather, we are attempting to call to your attention the need for immediate action.

Example No. 1. In Michigan, a dealer was asked if LP-Gas was satisfactory for heating a home. His answer was "No. It is too expensive." When told by the shopper that he favored electricity for cooking, the LP-Gas dealer gave a splendid sales presentation on the gas range. However, not one word was mentioned of the other services, such as refrigeration or water heating. The shopper got the impression that cooking was the only thing gas would or could do efficiently.



L. A. BRAND

Difference in Salesmanship?

The surprising thing is that another LP-Gas dealer 25 miles from this dealer, who said gas was too expensive with which to heat, installed 127 gas heating jobs in 1948. In this particular locality LP-Gas is cheaper than oil or coal for heating.

Example No. 2. In Arkansas, an LP-Gas dealer, when told that in the shopper's opinion electricity was superior to gas for cooking, shrugged his shoulders and said, "A lot of gas users don't think so." Nothing more was said on the subject of the gas range. He did say, however, "Well, you certainly can't heat your home with electricity." He then went into a long discourse on LP-Gas for heating. No reference was made to water heating or refrigeration. No further reference was made to gas for cooking. Result—the shopper left with the impression that LP-Gas was for home heating only.

Example No. 3. In Indiana, an LP-Gas dealer, when told that in

the shopper's opinion gas was dangerous, said, "Anything is dangerous if you don't know how to handle it." He then spent 15 minutes talking about power failures, how much the Government was spending to help REA and the power interests to ruin his business, but never a word about the efficiency of gas over electricity. Result—the shopper got the impression that gas was dangerous and that the dealer had circumvented his direct question.

Big Operators Were Included

Many like examples could be given. Over 400 LP-Gas dealers were contacted. Most of them were considered the larger operators in their respective territories. The examples outlined above were taken from written interviews with representatives of supposedly successful and outstanding operators; some of the biggest in the industry.

Further study disclosed that most utility associations have recognized the need for the proper training of sales personnel. The utilities hold weekly, yes, in some cases, daily training meetings, constantly teaching their salesmen proper methods.

From information we have, manufacturers' representatives can be made available at training meetings for LP-Gas men. There are available, capable, well trained instructors who will confine their talks to the overall picture of their companies or of their particular phase of the gas business, rather than concentrate on product or product name. Such men are available at no cost to LPGA. There is also available at no cost to this association, talent from gas appliance manufacturers to assist in preparing a booklet for salesmen on appliance selling.

Favors Sales Training Program

Because of the facts contained in this report, it is recommended this board appoint a committee to work with the officers in preparing suitable sales training programs to be presented at all state and sectional meetings. Also, this committee should investigate the possibilities of preparing a sales course similar to that prepared by the utilities associations, and making it available at nominal cost to LP-Gas men throughout the entire country.

In making this recommendation we realize that members of this association appointed to this committee will be burdened with a tremendous task, but we feel that the LP-Gas industry will benefit if the job is well done. Also, that nothing more important can be done to offset electric competition.

"Prefabricated" Heating System Solves Ski Lodge Rush Job

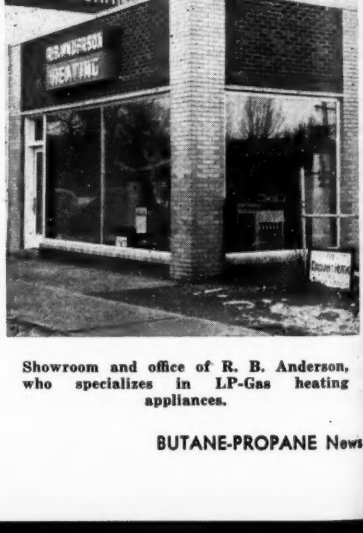
LIQUEFIED petroleum gas is providing comfortable radiant heating in one of the country's most unusual mountain-resort locations—as the result of a clever engineering feat carried out by Robert Anderson, LP-Gas dealer who heads Robert Anderson Heating Co., Denver.

Mr. Anderson, who installs "custom" heating systems utilizing both natural and liquefied petroleum gas, found himself faced with an unusual problem when Stewart Mace, Colorado lodge operator, came to him requesting a radiant heating system for installation in a beautiful new ski lodge, being built at Aspen, Colo., famous mountain winter resort. With the old mining "ghost town" now crowded through the week with winter sports enthusiasts, Mr. Mace had started construction of a ski lodge and hotel, accommodating more than 100 guests, and with restaurant, cocktail lounge, etc., behind an all-glass window front, facing toward the ski tow and slope. While the usual mountain fireplaces were provided throughout the building, Mr. Mace felt that the last word in radiant heating would be required for maximum comfort and appeal.

When the Colorado ski lodge operator approached the Denver heating firm, he ran against an unexpected obstacle—the fact that Robert Anderson Heating Co. was "snowed under" with previous contracts, which would make it impossible to dispatch a crew of steam fitters to the mountain resort. Anxious to get the lodge constructed in time for the 1948-1949 winter season, Mr. Mace exhorted the heating engineer to solve the problem in some way.

The practical solution was found in a novel "prefabricated job" which was shipped to the mountain lodge in a single convoy of trucks which carried every length of coil, screw and nut in a single load.

Mr. Anderson visited the ski lodge, quickly got the dimensions, calculated the low average temperature,



Showroom and office of R. B. Anderson, who specializes in LP-Gas heating appliances.

By GENE CREIGHTON

sharp drop during the night hours, sun load, etc., and promised to design a system to meet the need. This was engineered in the heating company office, blueprinted, and made up into a set of specifications to be easily followed by any carpenter, gas fitter or steam fitter.

All Parts Well Marked

After the first specifications were worked out, all coils, headers, motorized valves and pumps, the boiler, LP-Gas burners, tank, connections, etc., were fabricated in Robert Anderson Heating Co.'s large shop, each item carefully marked with reference to its connection and also the room or space in the ski lodge in which it was to be installed. In this way, one bundle of continuous coil piping would be marked "dining room—1" for the first coil to be installed in the dining room section, and "dining room 1-2" for the second coil, and so forth.

After prefabricating the entire system, and several "spares," the entire load was bundled on the trucks and taken to Aspen where it was installed by a local plumber and his crew. With concerted effort, and overtime hours, the system was installed in plenty of time for the first heavy snow of the year. After completion, the Denver heating engineer returned to the ski lodge, turned on the system, checked its operation, and found it ideal.

The celerity with which Robert Anderson Heating Co. executed this unique installation brought so much recognition from other mountain resort operators that the firm has contracted and installed seven more mountain lodge, hotel, cabin and resort building installations, all equipped with liquefied petroleum gas tanks ranging from 1000 to 5000 gallons capacity.

Minnesota Group to Oppose Industrial Commission Rule

Because regulatory authority would be vested in the State Industrial Commission instead of the Fire Marshal department, the Minnesota Petroleum Gas Assn. plans to oppose a bill introduced recently in the state legislature.

The bill states in part that "the State Industrial Commission shall prescribe rules and regulations not inconsistent herewith for the examination and licensing of bottled gas installers."

According to John L. Locke, secretary of the Minnesota association, the fire marshal's department should have the enforcement of any rules or regulations pertaining to the butane-propane industry in Minnesota. The association's legislative committee, headed by C. O. Middleton, is preparing a line of attack to alter the undesirable portion of the bill.

Second Pittsburgh School Planned for September

The second annual Eastern LP-Gas service school is scheduled for Sept. 7-9 at the University of Pittsburgh, according to word received from John Knox Smith, field engineer for the Liquefied Petroleum Gas Assn.

Al Lutz, chairman of District 7 educational committee and member of the national educational committee, LPGA, and Kenneth R. D. Wolfe, chairman of the national educational committee, named the dates and location of the school. They are almost an exact repeat of the first school, held last Sept. 8-10 at the same university.

BENEFIT AND SAVE MONEY WITH THE NEW C-2-B BY

STAMPINGS INCORPORATED

Another STAMPINGS Achievement . . .

THE NEW C-2-B WALL-MOUNTED HOUSING AVAILABLE NOW FOR QUICK DELIVERY

An entirely new model, the C-2-B is the result of planned progress—a plan intended to bring you a complete line of better housings. This new unit is made of heavy gauge aluminum—rust-proof and weather-proof. The C-2-B answers fully your need for a low-priced unit for the small and medium size regulator outfits. The C-2-B is low priced. Larger output and our investment is high production tools makes an exceptionally low price possible to you. Write for detailed information.

STAMPINGS, INC. DAVENPORT, IOWA

BUILT LIKE A CAR BODY

The C-2-B is made with high production tools in large presses just like automobile bodies. One piece construction—no seams—no welds—no joints.

EASY TO SERVICE

Our popular slip hinge, foolproof and weather-proof, is included on the C-2-B. Service man can couple and uncouple tanks rapidly and securely.

EASY TO INSTALL

The C-2-B is a wall mounted housing. Bracket is attached to housing at the factory. All the installer need do is locate the bracket and drive four screws.

ATTRACTIVE DESIGN

Modern home appliances today have smooth design. In keeping with this treatment is the new C-2-B. Your customers appreciate good design—it pays off.

Making Safe Installations in Schools

Requirements and Maintenance for Piping and Appliances. Venting.

PART 2

Part 1, covering installation and maintenance of piping in public schools, appeared in the March issue of BUTANE-PROPANE *News.*

Part 2 covers the requirements for installation, maintenance and venting of appliances in schools and completes the recommendations of the Lone Star Gas Co., Dallas, Texas.—Editor.

C. Requirement for Installation of Liquefied Petroleum Gas Appliances in Public Schools

1. AGA Approved Appliances. All appliances installed shall be of a type approved by and bear the seal of approval of American Gas Association Testing Laboratories for use with LP-Gas.

2. Sufficient Air for Appliance Operation. No appliance shall be installed in a location in which facilities for ventilation do not permit the proper combustion of the gas.

3. Appliance Connections. Appliances shall be adequately supported and so connected as not to induce any stress in the piping or connections.

4. Water Heater Relief Valve. No water heating appliance shall be installed in a closed system of water piping unless a water pressure relief valve is provided.

5. Appliances in Basements Prohibited. Appliances shall not be installed in any basement, semi-basement or other location where escaping gas may settle and collect.

6. Vented Heating Equipment. All gas heaters must be of such design that all products of combustion will be vented to the exterior air, and such heaters must be connected to properly installed vent piping.

7. Location of Appliances. Appliances should be located adjacent to flue or vent pipe to insure proper venting.

8. Appliance Connections. All gas heaters must be connected to gas outlet valve with rigid pipe and pipe fittings. Such rigid connections and piping must grade downward from appliance burner valve to gas outlet valve inside room. Flexible or semi-flexible connectors are not permitted.

9. Appliance Safety Cut-off. All automatically controlled gas appli-

By FEILD FOSTER

Manager, Stargas Department, Lone Star Gas Co., Dallas, Texas

ances shall be equipped with a means of completely shutting off the flow of gas to the appliance in the event the pilot flame should be extinguished.

10. Temperature Control. Thermostats of automatically controlled heating appliances should be of such design and construction and located so as to control the temperature of the rooms within 2 degrees of the predetermined setting.

11. Appliance Adjustment and Inspection. Every appliance shall be properly adjusted at time of installation and customer instructed in its safe operation.

D. Requirements for the Maintenance of Liquefied Petroleum Gas Appliances in Public Schools

1. Appliance Inspection. All appliances should immediately be inspected by an experienced gas serviceman and all defective, worn-out or obsolete equipment discarded and replaced with safe equipment.

2. Periodic Burner Inspection. Each automatically controlled gas appliance burner should be inspected at least once each week to insure proper operation of controls and proper combustion of gas. Manually controlled gas appliance burners should be inspected each time burners are lighted to insure proper combustion of gas.

3. Inoperative Appliance Control. Automatically controlled appliances shall not be used if any controls (safety cut-off, thermostat, etc.) become inoperative. Gas company should be called to make repairs or replacements before putting such appliances back into operation.

4. Undersize Appliance. If any appliance is undersize, do not adjust burner higher than appliance manufacturer's recommendation, install additional equipment or replace with appliance having ample capacity.

FEILD FOSTER

5. Appliances With Broken Parts. Do not continue to use any appliance which has broken or make-shift parts.

E. Requirements for Venting Liquefied Petroleum Gas Appliances in Public Schools

1. Vent All Appliances. All gas heating and water heating appliances shall be connected to properly constructed and installed vent systems.

2. General Venting Requirements. Vents from such gas appliances are necessary to carry products of combustion to the air outside of school rooms. The venting system must:

a. Prevent the hot vent gases from being cooled to such a temperature that the flue will not "draw" the vent gases out of the appliances into the open air.

b. Be constructed of materials that resist the deteriorating action of water that may condense on the inside surface of the vents, when this surface is cool.

c. Be of fire proof and weather proof material.

d. Have strength and durability to withstand breakage.

e. Be leak proof under expansion and contraction caused by repeated heating and cooling.

3. Materials for Vent Pipes, Chimneys or Flues. Materials of which

NEW LINE FOR PROFITS!

Announcing THE *New* EMPIRE GAS RANGE

The Highest Achievement of 50 Years of Stove Designing...

Now! EMPIRE Engineers present the new EMPIRE Gas Range. ar ahead in designing, beauty, and cooking efficiency, it is a triumph for the nation's leader in fine stove designing and gas engineering—EMPIRE. It will set the pace for leadership in sales—and profits.

IT HAS THE *Features* EVERY HOUSEWIFE WANTS...

...many not found in any other *gas* range on the market

The BROILER—full 17 x 20 in. in the clear, big enough for 6 T-Bone Steaks.

ACCESSIBLE FRONT CONNECTION speeds installation and service.

OVERSIZE OVEN—full 17 x 20 in. in the clear! Room for 25 lb. Turkey, 4 cake tins fit on rack.

4 LEVELING BOLTS keep EMPIRE Range level at all times.

Quiet DOOR SPRINGS are outside the heat zone.

SEE YOUR EMPIRE REPRESENTATIVE OR WRITE US DIRECT

EMPIRE STOVE COMPANY BELLEVILLE ILLINOIS

MANUFACTURERS OF GAS HEATING AND COOKING APPLIANCES

vent piping, connections, flues, and chimneys are constructed, sized and installed shall comply with standards established by American Gas Association, American Society of Heating and Ventilating Engineers, or other approved authority. For convenience some of the more important requirements are set out below.

4. Draft Hood. An effective draft hood shall be made a part of the connection to the chimney or vent pipe, unless the construction of the appliance serves the same purpose. Construction and installation of draft hood shall be such as to insure the ready escape of products of combustion under all conditions, prevent back draft from entering the appliance and prevent excessive positive draft within the appliance.

5. Damper. A damper or similar device shall not be used in the vent pipe from the appliance.

6. Size of Vent Piping. No appliance shall be connected to a vent, chimney or flue whose cross sectional area is less than the area of the vent collar of the appliance.

7. Appliance Vent Connections. Vent connections extending from appliance to chimney or vent pipe within the wall must be as short as possible and grade upward at least one inch per foot of length.

8. Lateral Vent Lines. So called "horizontal runs" of vent piping from appliance to vertical chimney or flue shall be as short as possible, not longer than 75% of the height of the vertical stack and grade upward at least one-half inch per lineal foot. In no case shall "horizontal run" exceed 20 feet. Lateral vent lines within walls or in attics should grade upward at least 45 degrees from horizontal. Lateral vent lines shall enter the vertical flue at least one foot above the bottom of the flue.

9. Height of Chimney or Flue. The vertical vent, chimney or flue shall extend at least one foot above the highest point of the building which is within ten feet of the termination of the vent, chimney or flue.

10. Vent Connections Into Flue. No vent connection shall project into the free area of the vent, chimney or flue.

11. Vents from Appliances Burning Other Fuel. Vents from gas appliances shall not be connected into a vent, chimney or flue to which is connected an appliance burning another fuel.

12. Vent Pipe Spacing from Inflammable Material. All vent piping must be at least one inch from wood or other inflammable materials.

13. Size of Vent Piping. All vent piping (from one or more gas appliances) must have at least one square inch cross sectional area for each 7500 Btu input of the appliance or appliances connected to such vent piping.

14. Converging Vents. When the vent piping from more than one appliance converge into a single vertical flue, the cross sectional area of the main flue shall not be less than the area of the largest vent plus 50% of the area of the additional vents.

15. Supporting of Vent Piping. All vent connections and vent piping must be securely supported at intervals of not more than six feet.

16. Flue Cap. Every vent or flue shall terminate in the air outside the building and shall be equipped with a suitable cap that prevents downdrafts and the entry of rain, sleet or snow into the flue. Caps shall have free ventilating area at least equal to the area of the vent pipe to which it is attached, and should be fitted with mesh wire to prevent the entry of birds, rodents, etc.

Along the Legislative Front

LEGISLATURES throughout the nation are working overtime to consider changes in existing laws and to make new ones.

In many states bills have been introduced to control the distribution of butane and propane, with the proposed legislation fair to the industry in many instances, but in others indicating either lack of knowledge of the industry on the part of legislators or the subtle influence of competitive fuels advocates.

The first report on pending bills appeared in last month's issue of BUTANE-PROPANE *News* (Page 93). The progress of these bills and newly proposed laws are summarized below:

Alabama LP-Gas dealers want their state "cleaned up," the inference being that they would prefer supervision from the state fire marshal rather than the Public Service Commission. President Paul M. Jones of the Alabama association says that Alabama dealers are making strenuous efforts to inform their legislators of the advantages of safety and enforcement that would be secured by the marshal's office having the necessary authority.

•

The Arizona Corporation Commission lost its attempt to control liquefied petroleum gas in a court decree in February. Full text of the decision appears on Page 91.

And now, so the state can keep its fingers on LP-Gas operations, it is proposed in HB 167 to create a state fire marshal and fire advisory board to adopt, issue and enforce regulations establishing standards for the storage, sale and use of various products, including LP-Gas.

•

Arkansas killed the legislative proposal to make LP-Gas a public utility!

•

California, one of the first states to create its own LP-Gas code, may adopt NBFU Pamphlet 58 to cover all system installations if Assembly Bill 2269 is adopted.

This bill would also require special permits to install gas equipment in new apartments, hotels or dwellings within a city, and any apartment house or hotel in county territory.

There is also being considered a plumbing and gas code setting out specifications on installation of piping which would prevent the installation of an appliance "in a location which does not have adequate ventilation by gravity to the outside from floor level, or in any location where heavier-than-air gas might collect to form a flammable mixture."

•

In Connecticut the assembly has referred to its judiciary committee a bill which would prohibit in the sale of any petroleum products (1) price discrimination between different sections; (2) sales at less than cost; (3) special rebates and discounts; (4) "giveaways" with intent to injure a competitor's business.

HB 1446 would create a boiler board with jurisdiction over unfired pressure vessels (except ICC cylinders) and greater in volume than 5 cu. ft. The ASME code would be

standard, and the bill would provide for periodic inspections, inspection fees and operating permits.

A proposal to bring LP-Gas operations under utility laws is also pending.

•

Both Georgia houses passed Senate Bill 18 before adjournment on Feb. 19. It is up to the governor to sign. This bill names the insurance commissioner as the regulatory authority, with NBFU standards to be followed; an annual license fee of $100; and provision to require licensees to carry adequate insurance.

(Later: This bill was signed by the governor. Effective April 25.)

The legislature is due to reconvene in January, 1950, with all pending bills at time of the current adjournment remaining on the active list and retaining their present status.

•

The Kansas legislature wants to increase the motor fuel use tax to 5 cents per gallon until June 30, 1951, and thereafter to 4 cents.

•

If the Labor Commission will approve, Michigan will create a board of boiler rules with jurisdiction over unfired pressure vessels and require biennial inspections and inspection fees of $3 and up.

•

Minnesota is considering a house bill (No. 847) to amend the petroleum unfair practice act to prohibit discrimination through refusal to sell to any dealer or jobber.

HB 798 proposes that the state fire marshal have authority to make and enforce LP-Gas regulations, but HB 953 would authorize the State Industrial Commission to issue LP-Gas regulations and provide for licensing installers, inspections, and inspection fees.

A 2% general sales tax looms in Nebraska.

•

New Hampshire will be satisfied if it can get through a 1% sales and use tax.

•

New Jersey dealers will have to mark the net quantity of contents on all "containers" (including petroleum products), and also show names of manufacturers and distributors, if Assembly Bill 34 makes the grade.

•

New Mexico's HB 85 would (1) extend the licensing requirements of the present act to manufacturers of LP-Gas, and to each branch office within the state. (2) Require the payment of the $50 annual fee by manufacturers or sellers of containers, appliances and equipment; for manufacturers of LP-Gas; for each branch office; for sales of LP-Gas in self-service containers; and for the transportation of LP-Gas. It further clarifies the insurance provisions of the present law to outline more specifically the required coverage.

•

Another public service commission greedily seeks more authority, this time in New York, where a bill would give that body jurisdiction over "all individuals and companies which sell or distribute fuel."

•

Oklahoma HB 321 would require insurance companies to make 4% of their gross earnings available for gasoline and LP-Gas truck insurance.

•

South Carolina is looking for more sources of money to care for aged persons and proposes a 2 cent tax on all gas used as heating fuel, "providing the tax on such fuels shall be 12% of the retail sales price."

There's Spring Business in the Air, Mr. Dealer!

THERE ARE PLENTY OF FURNACE SALES TO BE MADE IN APRIL, MAY AND JUNE!

Tell contractors and home builders the story of WARCO low-cost heating and cash in on the all-year market in the new home construction field.

PS: If you are not a WARD dealer it will pay you to WRITE US TODAY.

Contractors, home project developers and individual owners are all looking for quality heating installations that meet their low budget demands.

Many Ward dealers are cashing in on this great all-year market. They are beating the competition with WARCO Furnaces that provide plenty of heat, luxury features and a five-year guarantee at the lowest comparative cost.

WARCO

FLOOR AND DUAL FURNACES

WARD HEATER COMPANY • 1800 W. WASHINGTON BLVD. • LOS ANGELES 7, CALIF.

In South Dakota the unusual situation presents itself of the House introducing a bill which would "exempt motor fuel and fuels subject to the use fuel tax from the sales and use tax," but another bill wants you to specify that you use LP-Gas in a motor vehicle, if you do.

•

An effort to bypass the Texas Railroad Commission appears in Senate Bill 256 which would amend the existing law to permit the sale and installation of "butane gas appliances" without a license from the RRC.

In the House, a processing tax of 1 cent per gallon is proposed on LP-Gas (and other products) manufactured in the state and upon such products stored in the state even if brought into Texas from elsewhere.

•

It is proposed to amend the motor fuel act in Utah to exempt LP-Gas in steel containers when used in other than internal combustion engines. (Later: Passed by both houses.)

The sales tax may go from 2% to 3%.

•

Vermont proposes to give its fire marshal wide latitude in allowing the adoption by reference, as regulatory material, any nationally recognized code. That could be NBFU Pamphlet 58, if someone will tell the fire marshal about it.

•

Washington wants LP-Gas vessels put under the control of the boiler board, with the ASME code as standard. Fabricators' fees of $2 and $3 on pressure vessels are provided.

•

Both houses of the Wyoming legislature, before adjournment on Feb. 19, passed a senate bill exempting from taxation the property of co-ops and associations engaged in rural electrification.

The creation of a fire marshal office was killed, as was a proposal to create a boiler inspection department having jurisdiction over unfired pressure vessels.

Bottled cooking gas purchased for use in Binghamton, N. Y., is subject to the city's 3% tax on charges for utility service, according to Darwin E. Krum, special deputy comptroller attached to the Permissive Tax Bureau.

6650 Filled Cylinders Take Passage for Brazil

"Operation Brazil" might well have been the title of an undertaking completed late in March when the last of three shipments of ICC cylinders left by boat from Wilmington, Calif., for the distant ports of Santos and Rio in Brazil.

It was a project which took three months to complete and included the filling, marking and shipping of 6650 cylinders.

Purchaser of the cylinders was the Ultragaz Corp., of Brazil. This company bought them from the General Petroleum Corp., of Los Angeles, who arranged for the filling and shipping operation.

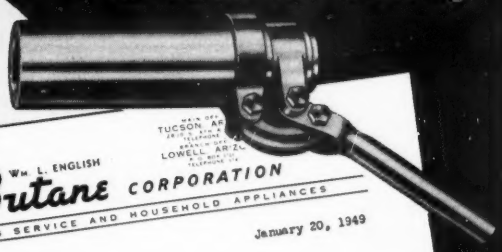
Manufacturer of the cylinders was Compressed Gas Cylinders, Inc., of Los Angeles. This organization produced the 100 lb. ICC cylinders, with special markings, including stamping on the cylinder, along with other standard markings, the name "Ultragas."

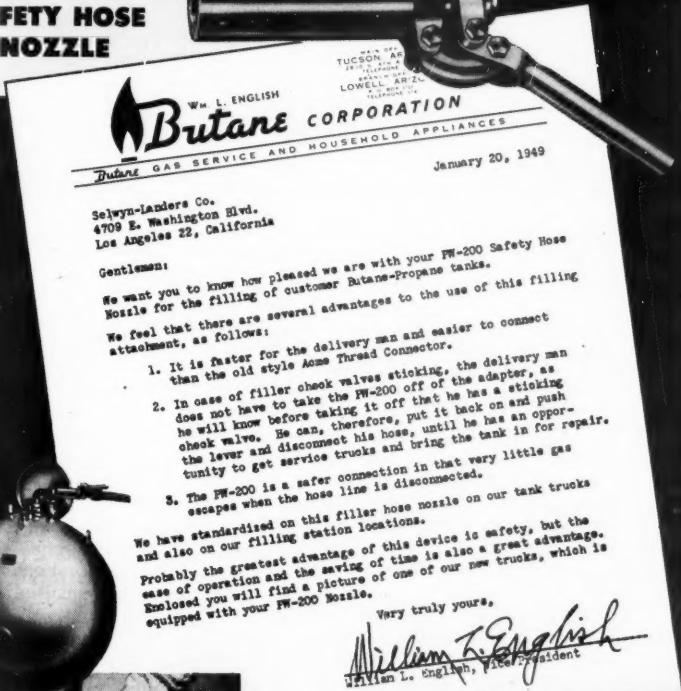
The cylinders were delivered to the company selected to fill them in lots of 1000, 3500 and 2150. The filling organization was Mutual Liquid Gas Co. of Inglewood, Calif., headed by Joe Fagan. With one of the Southland's most modern bulk filling sta-

MR. ENGLISH SAYS:

"...greatest advantage of this device is safety"

PW-200
BUTANE-PROPANE
SAFETY HOSE
NOZZLE





Wm. L. ENGLISH
Butane CORPORATION
Butane GAS SERVICE AND HOUSEHOLD APPLIANCES

TUCSON, ARIZ.
LOWELL, ARIZ.

January 20, 1949

Selwyn-Landers Co.
4709 E. Washington Blvd.
Los Angeles 22, California

Gentlemen:

We want you to know how pleased we are with your PW-200 Safety Hose Nozzle for the filling of customer Butane-Propane tanks.

We feel that there are several advantages to the use of this filling attachment, as follows:

1. It is faster for the delivery man and easier to connect than the old style Acme Thread Connector.
2. In case of filler check valves sticking, the delivery man does not have to take the PW-200 off of the adapter, as he will know before taking it off that he has a sticking check valve. He can, therefore, put it back on and push the lever and disconnect his hose, until he has an opportunity to get service trucks and bring the tank in for repair.
3. The PW-200 is a safer connection in that very little gas escapes when the hose line is disconnected.

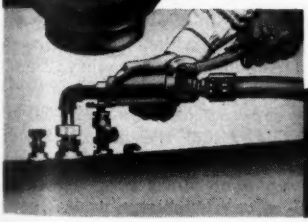
We have standardized on this filler hose nozzle on our tank trucks and also on our filling station locations.

Probably the greatest advantage of this device is safety, but the ease of operation and the saving of time is also a great advantage. Enclosed you will find a picture of one of our new trucks, which is equipped with your PW-200 Nozzle.

Very truly yours,

William L. English, Vice President

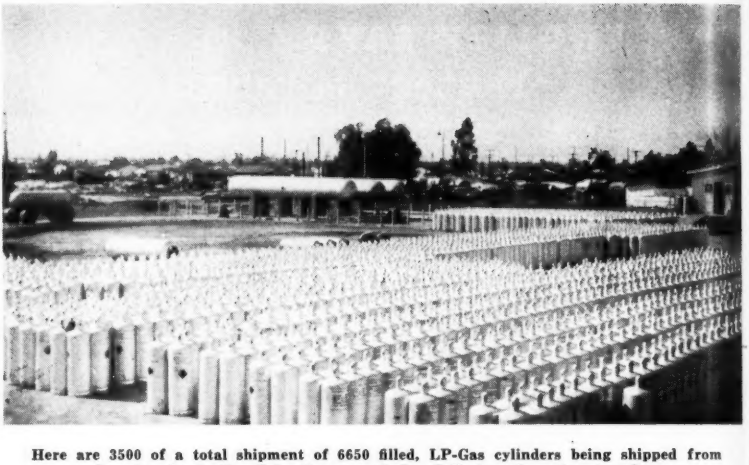
"Butane begins where the Gas Main ends"



S-L

SELWYN-LANDERS COMPANY

4709 E. Washington Blvd., Los Angeles 22, Calif.



Here are 3500 of a total shipment of 6650 filled, LP-Gas cylinders being shipped from Los Angeles to Brazil by Compressed Gas Cylinders, Inc., Los Angeles.

tions, this company was in a position to handle the shipments in rapid order. This, of course, had to be done in conjunction with their existing, regular business.

The decision to fill the cylinders in the United States prior to shipment was influenced by the fact that they were shipped as deck cargo and the cost of shipping was determined by cubic foot displacement instead of weight. Thus, their shipping cost is the same full or empty.

The cylinders were handled in groups of 50 and were filled by Mutual's crew whenever their regular duties allowed. Each cylinder had to be moved from the ground to the loading dock, where it was labeled by stencil. This included destination, gross, tare and net weights, cylinder number and name of receiver.

After marking, the cylinders were filled on one of the three automatic scales available. The roundtrip for this work took about one and one-half hours for the 50 cylinders. Of course, a complete record for gross and tare weight was kept on each cylinder.

Cities Service Oil Co. Elects Lloyd Lynd Vice President

Lloyd Lynd has been elected a vice president of Cities Service Oil Co., according to a recent announcement. He was formerly treasurer and director of the company.

Word has also been received that Cities Service plans to build a new natural gasoline plant to process casinghead gas which is produced in the Chico field of Wise county, Texas. The plans call for an eventual processing capacity of 22 million cu. ft. of gas daily and the installation of five 600 hp units. Completion of the first step in the total program is expected to occur yet this year.

Appliance Demonstrations Build Consumer Acceptance

By RITA CALHOUN
Home Service Director,
Portland Gas & Coke Co., Portland, Ore.

ONE OF our nationally known home service directors has said, "Domestic gas appliances are engineered by men, built by men, sold by men — and used by women." But in this highly competitive world it's no longer enough to use the masculine slant, alone, in selling.

RITA CALHOUN

The salesman must understand how the appliances he sells fill the homemaker's needs—perhaps even better than she does, herself. He must know how new trends and new features will fit into her homemaking picture, so that her objections may perhaps be answered even before they are voiced, and certainly so that he may answer the claims of competitive equipment. Unless a salesman can explain to his prospect the "whys" of many of our appliances uses as well as the "hows," a fair number of these prospects will give him a "no" when he asks them to sign the order.

This doesn't mean that the salesman should pretend to know how to fold in the egg whites more skillfully than the homemaker. She will catch him up on that and he will "lose face," but I do think that it's important that he should know what type of pans are desirable, what time and temperature to use and how to place the pans in the oven.

In our company, the home service department takes an active part in the training program for new salesmen—both dealer and company. We make home calls when a new range is sold by either company or dealer salesmen, giving the homemaker information regarding its proper care and use.

Feature School Demonstrations

We give demonstrations for all home economics classes in schools where gas ranges are used, and that includes practically all schools in the territory which we serve. During 1948 we gave 261 school demonstrations to a total of 5894 students.

We give cookery demonstrations to women's club groups in our own Hospitality House meeting rooms.

We also give salesfloor demon-

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This paper, originally titled "Selling the Ladies," was delivered by Rita Calhoun at the March 18 meeting of the Northwest Division, LPGA, at Portland, Ore. In this new day of selling, the many suggestions will be valuable aids to LP-Gas dealers seeking new business in a highly competitive market.—Editor.

strations in dealers' stores as well as our own.

We teach cookery to 4-H Club boys and girls, Girl Scouts, Campfire Girls and their leaders. Of course, there are many other activities in which we participate, too, but those are our main, big jobs.

However, since you as a group have no such departments, let's see if you can find some substitutes.

1. Most manufacturers have literature designed for home economists. Why not place your names on their mailing lists? You will find some good sales material interpreted in terms of the homemakers' needs.

2. Many manufacturers' representatives are accustomed to making presentations of their appliances to home service departments. Ask them to make similar presentations to your salesmen.

3. Many counties employ extension home demonstration agents who are home economists working with units of rural women. I suggest that you cultivate the cooperation of these home economists since they hold a unique position in their counties. See that their names are placed on manufacturers' and AGA mailing lists for home service material. They often give cooking demonstrations to their leader groups and it would be an advantage if a live range and small seating capacity space could be made available for such meetings.

Often their demonstrations are given in Grange halls with perhaps the aid of a portable electric plate. Because of the federal tie-up, these home economists usually work closely with the Rural Electrification program. Some, in fact, have had very limited experience with a modern gas range. It seems to me that it is the responsibility of the LP-Gas industry to do something about this.

4. For similar reasons, do not neglect your local home economics school teacher. We are doing our best to help train these teachers while they are students at Oregon State College. We provide modern gas ranges for each room where classes in food preparation are held. But how about Washington State? There is no utility company serving Pullman. So wouldn't it be a fine idea to supply some of your units for their home economics department?

Most range manufacturers have very liberal sales programs for schools, but they must have the cooperation of the local dealer to be effective. And when a modern gas range is installed in a school, take pains to see that the teacher has correct and up-to-the-minute information about its operation and many advantages. Put her name on the factory home service mailing lists. Also, make regular and careful inspection to see that the range is kept in correct adjustment. Remember that the high school senior class in food preparation includes many of next year's new homemakers.

5. Other home economists who may occasionally visit your community are those representing glass canning jar manufacturers, meat packers, flour milling companies and other food processors. If they conduct cooking schools, it will be a real advantage if they use your gas equipment.

The opportunity of making an in-

stallation in an unusual place makes a good demonstration of the flexibility of your service. A few years ago, the Pacific Coast Gas Assn. Home Service Workshop was held at mile-high Timberline Lodge, and we demonstrated a range and gas clothes dryer using LP-Gas, so we are sure that your service can be installed any place.

6. Women love recipes, and an attractive little cook book is a surefire medium for making contact with the homemakers' interests. The American Gas Assn. has recently published a new edition of a splendid cook booklet called "Food Is Fun." This colorful booklet contains some fine sales angles interpreted in terms of a woman's many uses of a range.

Some of the section titles are—"Roasts to Boast Of," "Mother Is Two People," and "Out On Top." Sounds interesting, doesn't it, even to sophisticated salesmen? This booklet, "Food Is Fun," is available from the American Gas Assn. at a reasonable cost; and I am sure that you would find it a valuable sales tool. One way to use it is to offer to deliver one to the prospect whom you were unable to close on the sales floor.

"Food Is Fun" should be a **must** for the salesman's home study. Remember that it was written **by** women, **for** women; it will give you many clues to the sort of an approach which appeals to us—The Colonel's Lady—Judy O'Grady—all of us.

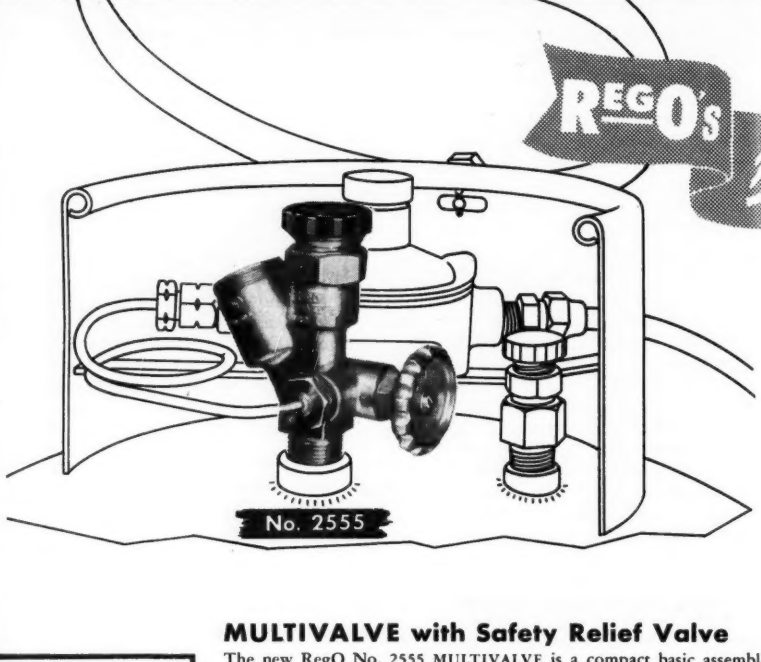
7. AGA has available another booklet called "Automatic Gas Cookery." This is a manual for home economists designed to help teach the correct operation of the modern gas range. Not only does it provide valuable information for the salesman, but he should see that a copy is presented to every home economics teacher in his territory, even though she may not have a gas range to use. If you have not become acquainted with her previously, it will give you an excuse to call upon her.

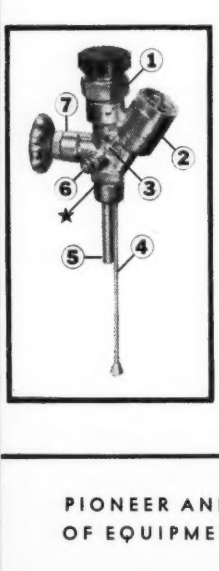
8. The Portland Gas & Coke Co. has produced a slide film with a transcribed sales story called "Hot Water Helps." It is designed to show what an automatic gas water heater can do to help the young homemaker in her daily tasks and we have found it valuable to show to women's groups. Copies of this slide film may be obtained from Fred Kimball of our company. We have also used the AGA film "Winning Seals of Approval" for many women's club groups and for school home economics classes.

Do these suggestions seem to take a lot of time without getting a single name on an order? Public acceptance, woman's acceptance, is an all-important factor. The right word of comment from one woman to her neighbor, spoken at the Grange social or the Extension cooking lesson, can be the crucial point in your success in "Selling the Ladies."

Be sure that your interest in the woman's point of view is a sincere one. She will be quick to detect a greater interest in the sales commission than in her own special problems. Remember that she spends most of her day on this job of homemaking — a good part of that in cooking the family meals — and she wants to feel that you appreciate the importance of her efforts. She wants to be shown how the new appliance will make this job easier, quicker and more certain, and she likes to have these things explained by an earnest and sympathetic salesman.

FOR USE ON ICC CYLINDERS OR ASME AND





MULTIVALVE with Safety Relief Valve

The new RegO No. 2555 MULTIVALVE is a compact basic assembly for bulk delivery systems. It combines all 7 features described below into a single unit.

The integral pop-action safety relief valve has ample discharge capacity to meet all safety requirements for installations on:

ICC 4B 240 Cylinders up to 420 lbs. of LP Gas Capacity.

U-68, U-69 and API-ASME Containers up to D x U equal to 16 and 55, for aboveground and underground containers respectively.

RegO No. 2555 MULTIVALVES provide for wide flexibility of installation as shown by these optional features: Service Withdrawal—vapor or liquid • Inlet Connection—1" • Liquid Eduction (for emptying container) —by extending baffle tube to bottom of container • Fuse Plug or Pressure Gauge optional • Filler Valve Connection—1¾" Acme, 1¼" Acme or 970 POL.

Only One Container Connection Required For All of These!

1. Double Check Filler Valve • 2. Safety Relief Valve • 3. Fixed Tube Liquid Level Gauge • 4. Fixed Liquid Level Tube and Deflector • 5. Liquid Baffle or Liquid Eduction Tube • 6. Fuse Plug or Pressure Gauge (optional) • 7. Service Outlet Valve ★ Extra Heavy Wrenching Section for Positioning MULTIVALVE.

PIONEER AND LEADER IN THE DESIGN AND MANUFACTURE OF EQUIPMENT FOR USING AND CONTROLLING LP GASES

LP-Gas Operations Not in Utility Class, Rules Arizona Superior Court

FOR several years Arizona distributors and dealers have been disturbed by a threat of the state's Public Service Commission to declare the business of distributing butane and propane a utility operation.

Although the industry believed there to be no logical foundation upon which to base such an action, and although similar efforts in other states have resulted in failure, there was a possibility that the courts might rule unfavorably in Arizona.

To clarify the issue and terminate the indecision, Butane Corp., Phoenix, brought suit in the superior court of Maricopa county against the members of the Arizona Corporation Commission to determine whether or not the commission has, or could be construed to have, jurisdiction over the operation of LP-Gas distributors within the state.

Upon Feb. 10, Judge Walter J. Thalheimer rendered a decision in favor of the plaintiffs.

Because of the wide interest attached to this case, and because efforts may be made in other states to hamper the liquefied petroleum gas industry by similar efforts by utility commissions, details of the Arizona judgment are given here.

The decision stated:

1. That the material allegations of plaintiff's complaint are true and supported by the evidence.

2. That plaintiff is an Arizona corporation engaged in a general mercantile business in Arizona, selling petroleum products, including butane, generally at retail, supplying a substantial number of persons with said products.

3. That in its business aforesaid, plaintiff has not and does not, hold itself out to the public without limitation or discrimination but, on the contrary, has dealt and deals with each prospective customer upon a private, contract basis, reserving the right to reject proffered business, at its discretion.

4. That all of the products so sold and delivered by plaintiff are sold and delivered in liquid form and none of the products so sold and delivered by plaintiff are sold or delivered as a gas.

5. That plaintiff does not have or enjoy a monopoly in its said business, or any phase thereof, but, on the contrary, said business is highly competi-

tive both as to other suppliers in the field and as to other products sold in competition with those sold by plaintiff; that plaintiff does not hold or enjoy any franchises or other special privileges and does not use or occupy the public highways or other public places in the conduct of its said business in any greater degree than do other ordinary mercantile businesses.

6. That the products sold by plaintiff are in some instances delivered to its customers at plaintiff's place of business and in other instances they are delivered to the customers' residence or other establishments by trucks operated by plaintiff. None of said products are delivered by plaintiff to its customers through any central system of pipes.

7. That the word "oil" as used in Section 2, Article 15, Arizona State Constitution, refers to petroleum as such and does not refer to all of its derivatives or to all other unctuous substances commonly referred to as "oil."

8. That Sections 2 and 3, Article 15, Arizona State Constitution, refer only to concerns which have devoted their property to the public use as public utilities in the usual and accepted sense and meaning of that term and do not impose or attempt to impose such a status upon businesses such as that carried on by plaintiff and accordingly plaintiff is not subject to the jurisdiction of the Arizona Corporation Commission as a public service corporation and said constitutional provisions and Chapter 69, A.C.A., 1939, have no application to plaintiff and its business operations.

9. That if said Article 15 and said Chapter 69 be construed to impose the status of a public service corporation upon plaintiff the same would then contravene the provisions of the Fourteenth Amendment to the Constitution of the United States.

10. That defendant Arizona Corporation Commission, prior to the filing of this action, proposed to impose upon plaintiff the status of a public service corporation pursuant to a claimed authority and jurisdiction conferred upon said Commission by said Article 15 and said Chapter 69 and, accordingly, an actual controversy existed between the parties.

It is ordered, adjudged and decreed:

That Sections 2 and 3, Article 15, Arizona State Constitution, and said Article 15, do not impose upon plaintiff herein, Butane Corporation, a corporation, the status of a public service corporation and said constitutional provisions and Chapter 69, A.C.A., 1939, have no application to plaintiff and its business operations which are hereby declared to be exempt from the provisions of said Article 15, and said Chapter 69, and not governed thereby.

That said plaintiff herein is not and has not been "engaged in furnishing gas or oil for light, fuel or power" within the meaning of said Section 2, Article 15, Arizona State Constitution and said Section 2 has no application to plaintiff and its business operations.

O. K. Gas Distributing Co. Will Operate in Two States

Harry Kinnett and Robert Martin have organized recently the O. K. Gas Distributing Co. of Ripley, Ohio. Both were formerly associated with Ripley Gas Service, of the same city.

The new organization plans to distribute fuel on a wholesale basis to dealers in southern Ohio and northern Kentucky, this accounting for the letters "O" and "K" in their firm name.

How You can Profit from *Magic Chef's*

APPEAL

READY-MADE MARKET

anticipation

Magic Chef's 30 years of strong, steady national advertising brings you the sales acceptance of a ready-made market. Having built a customer "anticipation" for you, Magic Chef also brings you the tools of "demonstration"—a complete merchandising program. Use these tools and the final step is sure to be "installation." And, of course, that clear, sweet ring of the cash register. Magic Chef's sales promotion program is your program. Plan now to use it to the fullest to get your share of Magic Chef's ready-made market. Ask your Magic Chef representative about our cooperative advertising plan and complete merchandising service.

demonstration

AMERICAN STOVE COMPANY
1641 SOUTH KINGSHIGHWAY • ST. LOUIS 10, MO.

installation

Magic Chef

the Easiest Range of All to Sell!

ASSOCIATIONS

AGA

Gas appliance salesmen throughout America are now seeing and will see in the fall full-page and two-page four-color spreads advertising automatic gas water heaters appearing in the Saturday Evening Post, American Home, Better Homes and Gardens, and other national magazines. These ads were placed by the AGA, as a facet of its participation in the national "Court of Flame" promotion campaign.

The AGA is spending $110,000 of its 1949 advertising budget on these colorful gas water heater ads. An additional $600,000, approximately, will be spent this year in a continuation of the highly successful range campaign which was carried on in 1948.

The "Court of Flame" campaign is being waged by forces which include, besides the AGA, GAMA, gas utility companies, gas water heater manufacturers, distributors, dealers, and LP-Gas operators. In addition to the various national campaigns, local advertising will swell the total expended to more than $1 million.

GAMA

Fourteen divisions and groups of the Gas Appliance Manufacturers Assn. will review and assay current and future marketing, advertising and sales plans for heating equipment, ranges, hot water heaters, refrigerators, clothes dryers, incinerators and other gas operated appliances, in April, it has been announced by H. Leigh Whitelaw, managing director of the organization.

The division and group meetings are on the agenda of the annual spring meeting of GAMA, which will be held April 5-7 in the Hotel Broadmoor, Colorado Springs, Colo., with an expected attendance of 535 manufacturers.

The divisional meetings will be in addition to general sessions at which leaders will discuss the outlook and progress being made in coping with current problems in the various fields of gas activity, Frank J. Nugent, president of GAMA, has informed the membership.

Natural Gasoline Industry Awaits Hanlon Award Decision

Every year at the convention of the Natural Gasoline Assn. of America high interest centers in the selection of some man who will be declared winner of the Hanlon award.

PRESIDENT, NGAA

C. R. WILLIAMS

This will again be a feature of the NGAA gathering in Texas April 20-22. But, also, there will be well selected papers and discussions of particular interest to natural gasoline men throughout the country. Secretary William F. Lowe states that a better program has never before been arranged.

A round table question and answer session will follow the pattern of former meetings, which has always

been one of the outstanding features from the standpoint of general interest.

The entertainment program will again be in the able hands of the Natural Gasoline Supply Men's Assn. which promises a better time than ever before.

Convention headquarters will be at the Texas hotel, Fort Worth. Reservations should be made directly with the hotel.

LPGA Convention and Trade Show Will Open May 9 in Chicago

MRS. J. R. VERKAMP

MRS. R. G. POETHIG

THE program for the LPGA'S 1949 convention and trade show at the Palmer House in Chicago May 9-11 is virtually set. As established now, the program will include the following speakers and meetings, with K. H. Koach presiding.

Monday, May 9.—Morning: Registration and board of directors meeting.

Luncheon speaker—Clayton Rand, Gulfport, Miss., "Pilot Lights and Torches."

Afternoon: Howard D. Valentine, director of sales promotion, Peoples Gas Light & Coke Co., Chicago, "Organized Chaos or Regimented Confusion in Sales—Which?"

Frank J. Nugent, president, GAMA, "Operation Enterprise."

First business session, address of President K. H. Koach and reports of officers and committees.

Evening: Exhibit hall open, 7 to 10 p.m.

Tuesday, May 10.— Exhibit hall open in morning. No sessions.

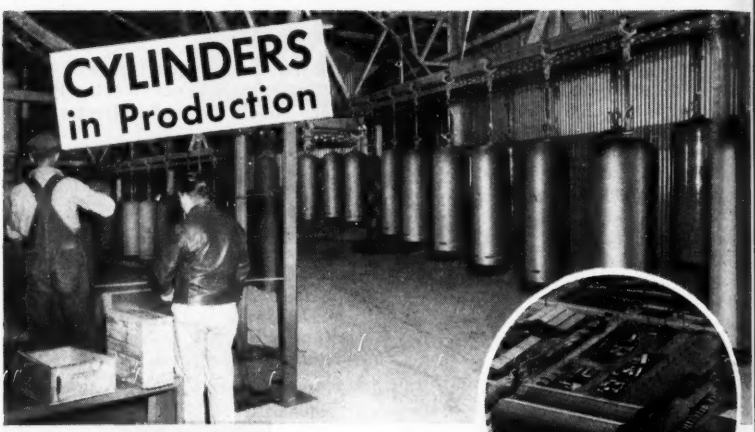
Luncheon speaker—Roberto de la Rose, Mexico, "The Other American Way of Life."

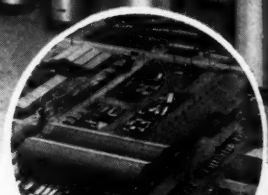
Afternoon: Second business session, reports of elections, meetings of marketers, producers, equipment manufacturers, appliance manufacturers, utilities, international sections.

Evening: Cocktail party. Exhibit hall open.

K. H. KOACH

HOWARD WHITE





AERIAL PHOTO OF PLANT
in
BATON ROUGE, LOUISIANA

The practical skill of an experienced manufacturer of LPG vessels stands behind this production line of I. C. C. Cylinders. Mass production facilities plus careful quality controls assure you of the best buy.

Study the Facts – Then Order the Best!

1. All cylinders are thoroughly annealed after all fabrication by electronically controlled furnaces.

2. Design of the Foot Ring facilitates easy cleaning, eliminating usual corrosion problem.

3. Circumferential welding of the two deep drawn halves by automatic process assures uniform strength at this important stress point.

4. Economical tare weight of only 92 lbs.

5. Independent inspection and certification of each cylinder by Pittsburg Testing Laboratories.

DELTA TANK MANUFACTURING CO., INC.

P.O. BOX 1469, BATON ROUGE, LOUISIANA P.O. BOX 1091, MACON, GEORGIA

Manufacturers of LPG PRESSURE TANKS and I. C. C. CYLINDERS

DELTA TANK MFG. CO. INC. DELTA

J. R. VERKAMP

A. VON WENING

Wednesday, May 11 — Morning: Board of directors meeting. Exhibit hall open.

Luncheon speaker: Richard Harkness, NBC commentator, Washington, D.C., "Washington Behind the Scenes."

Afternoon: A. von Wening, vice president, A. O. Smith Corp., Milwaukee, "Looking Ahead in Business."

James Neiderhouser, vice president, Continental Can Co., New York City, "Industry Relations."

Ernest S. Allsop, second vice president, Prudential Insurance Co., "Financing by Purchase Lease."

Final business session.

Evening: Banquet and entertainment.

Entertainment for the last evening, which will be titled, "The Gas-Flame Gaieties," will include artists from Chicago night clubs, with the prospect that additional stars appearing in Chicago at convention time may also be signed.

Most of the sections are planning simple business sessions, according to Howard D. White, executive vice president of the association. Exceptions include the marketers' section, which will hear F. N. Havens, vice president, Midland Industries, Independence, Kan., on "Proper Records Can Increase Your Profits." Other speakers on the marketers' docket, which puts the accent on "good management practices" have yet to be announced.

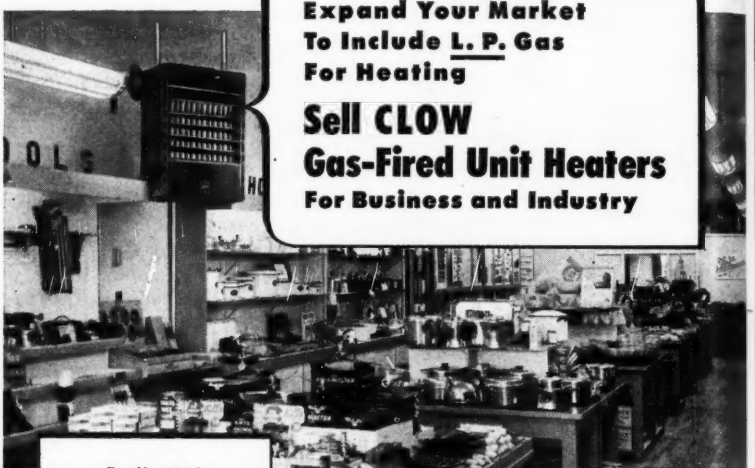
The utilities section will hear H. Emerson Thomas, H. Emerson Thomas & Associates, Westfield, N. J., and vice president, Pennsylvania and Southern Gas Co., on "Unaccounted For and Leakage Problems and Methods of Correction"; Frank Knoy, gas research engineer, Eastern Gas and Fuel Associates, Boston, on "Problems Encountered in Interchanging Gases," and Ralph L. Sieben, president, Metrogas, Inc., Chicago, on "Flexible Rate Structures to Meet Changes in Fuel Costs."

The appliance manufacturers section will hear Lee Brand, Empire Stove Co., Belleville, Ill., on "Codes and Regulations," among other speakers.

A special committee, headed by Mrs. J. Richard Verkamp and Mrs. Robert Poethig, is planning extensive entertainment features for women who will be in attendance at the convention. In addition to luncheons, card parties, and style shows, visits to broadcasting studios will be arranged for seeing and hearing national radio programs.

Arkansas

An unfavorable report on an LP-Gas "control bill" being readied for the Arkansas senate was given after a special session of the senate public service commission committee in early



Expand Your Market
To Include L. P. Gas
For Heating

Sell CLOW
Gas-Fired Unit Heaters

For Business and Industry

For Use With
Liquefied Petroleum Gas

MADE IN 3 SIZES

85,000 B.t.u. per hour input
120,000 B.t.u. per hour input
150,000 B.t.u. per hour input

Every time you sell a Clow Gas-Fired Unit Heater to a business establishment, you've secured a large-volume customer for your L.P. gas sales. Here's your big *new* market, today . . . L.P. gas for *heating* in stores, factories, warehouses, filling stations, garages, bowling alleys and other commercial buildings. Remember summer time is replacement time. Start selling now for fall installation.

These Exclusive Clow Features
Make Your Selling Job Easier

- Longer life with ONE PIECE Cast Iron heat exchanger.
- READILY ACCESSIBLE for easy cleaning and servicing.
- QUIET operation. PLEASING design. ATTRACTIVE finish.

Write for free Copies of Descriptive Folders Showing Price.

JAMES B. CLOW & SONS

201-299 N. Talman Ave. • Chicago 80, Ill.

February. SB 147 would, in effect, have placed the butane and propane business in Arkansas under the state public service commission, and at first was favorably reported on by the senate committee.

Alerted by the Arkansas Butane Dealers Assn., dealers from all over the state attended a public hearing in Little Rock. The dealers opposition to the bill was presented by the ABDA's attorney, and a number of other experts spoke on the present laws in effect in the state (Arkansas has a model law, conforming to NBFU and NFPA Pamphlet 58), the supply of gas and who produces it (a report that a combine was controlling LP-Gas in Arkansas supposedly had influenced some of the bill's support), and the independence of the individual Arkansas dealer.

The "do-not-pass" report on the bill handed down after the special session was taken as good indication the bill would not reach the senate.

Previous to the public hearing, officers and directors of the ABDA had met in special session at the call of President D. G. White. Legislative and other immediately important matters were discussed.

The third annual convention and trade show of the Arkansas Butane Dealers Assn. has been set, tentatively, for June 12-14 in Little Rock. A proposal has been so submitted to the board of directors, providing the date does not conflict with other convention dates.

A number of requests for exhibit space have been received by the ABDA and indications are that the 1949 show will even exceed the 1948 attendance records.

Colorado

The fall convention of the Colorado LP-Gas Assn. will be held Sept. 25-27 at the Shirley-Savoy hotel in Denver, according to a recent announcement from association headquarters. T. H. Anderson, Skelly Oil Co., Denver, is chairman of the convention committee.

Announcement has also been received regarding the appointment of James C. Crawford to the post of executive vice president of the Colorado association. He succeeds James L. Bradley who resigned recently.

Mr. Crawford is also executive vice president of the Colorado Petroleum Marketers Assn.

As a result of the resignation of Del Olson as a director, A. B. Morrow, Burlington, has been elected to fill the vacancy.

Kansas

A change has been made in the date of the Kansas LP-Gas Assn. annual convention. The new dates will be April 19-20 at the Broadview hotel in Wichita, according to R. H. Mahnke, executive vice president.

Originally the meeting was scheduled for April 18-19. However, Easter Sunday falls on April 17 and the old dates would have necessitated exhibitors setting up their displays on Easter.

Louisiana

Representatives of the butane retailing business of Louisiana at a meeting in Baton Rouge, March 4, reorganized themselves as the "Butane-Propane Institute of Louisiana," with Louis Abramson Jr., New Orleans, president.

Area chairmen were appointed to bring the project to the attention of the approximately 100 dealers in the state, and it is hoped to have most of them affiliated with the institute when another meeting is held, April 22 in Alexandria.

The new institute replaces the old

L. ABRAMSON

K. E. JONES

J. M. ROBINSON

R. L. KIPER

Louisiana butane dealers' association.

Now business conditions have changed and there are threats in several directions, Mr. Abramson says. He cited among the present adverse circumstances:

A pending suit by the public service commission to have the liquefied petroleum gas commission declared unconstitutional. This state body enforces safety regulations in the handling, storage and use of butane;

A move by the public service commission in the same suit to take over regulation of the industry, including the fixing of rates, and possible licensing of dealers;

The operations of a legislative investigation committee which has been probing the butane situation for several months, but has not yet called the retailers in to hear their views, and

"Definite indications" of additional taxation at the next session of the legislature.

K. E. Jones, director of the liquefied petroleum gas commission, who was present at the meeting by invitation, told the dealers that one of their problems, the excessive cost of insurance, is in process of being modified. Insurance charges at present in some cases are reported to equal the entire profit of a dealer.

"Insurance has gone into a sellers' market, along with other commodities," said Jones. "I have heard of two or three companies that are now making a survey of the butane field, and you may see lower rates as a result."

Mr. Abramson, president of the new institute, told the meeting that the industry, with an annual business of $16,000,000, and its 85,000 consumers now needs to be protected from "unfair" attacks.

Elected as officers and directors with Mr. Abramson were John M. Robinson, Woodworth, vice president; F. J. Robeson, Coushatta, secretary, and Howard J. Carney, Lafayette, treasurer, with the following additional directors: Leslie R. Kiper, Monroe; Drozan Miller, Lake Charles; Charles Dossman, Opelousas; R. D. Phillips, Port Allen, and L. M. Waguespack, Vacherie.

Michigan

New officers were elected recently by the Michigan LP-Gas Assn. at its annual meeting in Grand Rapids.

M. L. McHenry, Pro-Gas Sales & Service, Muskegon, was named president. Harry Richards, Hi-Therm Gas Co., Reed City, will serve as vice president. Lou Marshall, Petgas Co.,

Petoskey, was reelected as secretary-treasurer of the association.

New directors are Nola Thomas, Cassapolis, and J. A. Lentz, St. Louis, Mich.

North Carolina

The first annual convention of the North Carolina LP-Gas Assn. is scheduled for the O'Henry Hotel in Greensboro, April 14-15, according to announcement from H. M. Dickens, secretary-treasurer of the group.

The association, which was organized last year, expects to have 100 members by the time of the forthcoming meeting.

The convention committee, composed of M. L. Bailey, J. C. Swanner, Jr., and J. P. Chance, is working toward a successful program. A group of excellent speakers is being lined up and will present timely subjects.

Registration will be on the morning of the 14th, with the first meeting session set for 2 p.m. It will be followed by a banquet that evening. Friday will be a busy day with sessions starting at 9:30 a.m., and going through until 4:30 p.m

Manufacturers' representatives have been invited to attend the convention and also to join the association as associate members.

Reservations should be made direct-

Officers and directors of the North Carolina LP-Gas Assn. (left to right): Clyde Jones, vice president; W. S. Lander, president; H. M. Dickens, secretary-treasurer; (Back row) J. T. Lee, director district 4; J. P. Chance, director district 3; M. L. Bailey, director district 2. (Director J. H. Gaston of district 1, not present when photograph was taken).

ly with the O'Henry hotel, which is holding a number of rooms for convention attendants.

J. E. WALLING Jr.

LYLE BLANTON

Texas

The Texas Butane Dealers Assn.'s board of directors met in Dallas Feb. 7, with the following men present: J. E. Walling Jr., pres.; A. O. Mallory, W. R. McCright, Odis Gray, C. H. Lacey, Fred Greenwood, Olin Calvin, Gene Bumpus, Ray Noblitt, and Gus J. Moos, Lyle Blanton, attorney-in-fact of American Lloyds insurance company, and Wm. J. Lawson, executive secretary of the association.

Mr. Blanton reported that the insurance company is now organized and ready to write business.

Mr. Greenwood, chairman of the convention and trade show committee, stated that his committee had met and worked over plans for the 1949 convention, to be held at Dallas, June 26-28. The Baker and Adolphus hotels will be convention headquarters.

The "Larger Tank Program," sponsored the past year by the TBDA, was reported a success by A. O. Mallory, chairman of the committee dealing with the program. He noted that no fuel shortages had been reported this year, attributing this fact in large part to the program. Mr. Mallory advocated doing everything possible to obviate a recurrence of the 1947-48 winter shortage.

Gus Moos, E. O. Brown, and Wm. J. Lawson were deputized to decide whether or not the TBDA should buy its present headquarters in Austin, or arrange for a long term lease.

Next meeting of the board will be held at Dallas May 16.

LPGA Appoints R. E. Borden Director of Publicity

Appointment of Robert E. Borden as director of publicity and advertising for the Liquefied Petroleum Gas Assn. was announced March 7 by Howard D. White, executive vice president.

ROBERT BORDEN

Mr. Borden, for many years publicity director of Commonwealth Edison Co., also served in various advertising and editorial capacities with the Chicago utility. He resigned at the end of 1947 and has recently been identified with the National Patent Council, American Fair Trade Council and the Anderson Co., automotive equipment manufacturer, in Gary, Ind., as director of publicity and publications.

Mr. Borden was president of the Publicity Club of Chicago in 1945-46 and president of the Industrial Editors Assn. of Chicago in 1934.

LMC
LUBBOCK MACHINE CO., INC.

L.M.C. on a Transport Truck Means

LOW
MILEAGE
COST

√ *Check this new LMC home delivery unit*

Ready for you:

ANOTHER LMC MONEY–MAKER

Makes you money by saving you:

TIME

1. Butane and Propane transported and dispensed from same truck.
2. Hose can be hooked up and placed on skirts behind hooks.

LABOR

1. Short skirts collect less mud and snow; give more clearance in deep ruts; more wheel clearance in putting on and removing chains.
2. Flexible coupling in tank header and between pump and tank header.
3. Pumping equipment can be arranged for pumping in tank, out-of-tank or across tanks.

MONEY

1. Lightweight, low center of gravity, streamlined design; and large capacity pump, lines and valves allow you a higher payload, greater durability of truck and tires.
2. Low initial cost includes complete mounting, plumbing rearrangement and replacing of truck exhaust and muffler to front of truck. Also full clearance lights, directional signal and large stop light.
3. Needle bearing universal joints with square shaft, allow axial movement of shaft which increases life of joint, makes pump replacement easier.
4. Tanks can be furnished in ASME code No. U-69 or No. U-201.

TRANSPORT TANKS | STORAGE TANKS | DOMESTIC TANKS | SKID TANKS

LUBBOCK MACHINE CO. INC.

Lubbock, Texas, Ph. 6006, Box 1138

LMC—LOW MILEAGE COST—LMC—LOW MILEAGE COST—LMC

Ways to Defeat Electric Competition Discussed at Atlanta LPGA Board Meeting

By ED TITUS

COL. E. L. MILLS

HERMANN PARIS

THE publicity program, electric competition, legislative matters and a dozen or more other topics of vital industry interest occupied the attention of the board of directors of the Liquefied Petroleum Gas Assn. in a meeting marked by active interchange of ideas at the Atlanta Biltmore Hotel, Atlanta, Ga., Feb. 28-March 1.

President K. H. Koach presided at all but the first board session.

There was some lively discussion of the kind of material the LP-Gas industry should get out to combat the unjustified slurs by the electric industry.

Speaking for the publicity and advertising committee, Si G. Darling urged that rather than getting out a booklet designed to answer defensively the electric assertions, it would be better to go on the offensive with the LP-Gas program.

Varying degrees of aggressiveness in promotion were advocated by those present. Let 'em have it with both barrels, was one sentiment expressed.

The committee was authorized to go ahead in preparation of a folder, which would take into account views expressed at the meeting.

Mr. Darling explained that the sales portfolio would be out soon. He said the profit package was meeting continued success. A million pieces of advertising material per month are going out, and have helped a lot.

He passed around one of the new slide-rule-like calculators which permit a quick comparison of the cost of LP-Gas with electricity.

Robert Borden, newly associated with LPGA to handle sales promotion and advertising, was introduced to the meeting. Mr. Borden comes to LPGA after almost 20 years' connection with Commonwealth Edison in Chicago.

A report on the plan to bring the state associations into one unified setup with the LPGA was read by Col. Ellsworth Mills. Involved in the plan also is the reduction in number of districts of the association in the United States to six.

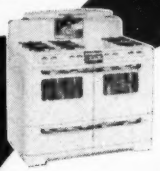
The plan was approved in general with instructions to the executives of the association to work out the details and submit it to the vote of the membership.

A proposed advertising program for the industry was discussed in detail by Howard L. Neumann, of Lowe Runkle Co., Oklahoma City. Mr. Neumann pointed out that no one today

Beautiful, aren't they? and they stay beautiful

Especially Designed for Use with LP-Gas

Also completely automatic clock control models available for LP-Gas.



The Extra Capacity STRAND

The separate high broiler BERKSHIRE

The Spacious OXFORD

Universal's

Balanced Line of LP-Gas Ranges

Offers a range { **1. To fit every kitchen** **2. To fit any pocketbook** **3. To fulfill all needs** **4. To suit any fancy**

There are models 19", 36", 40" and 43" wide.

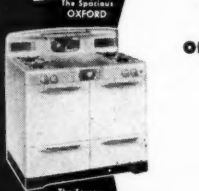
There are spacious 16", 17" and 18" ovens.

8 Basic Models—

36 Different Ranges from which to choose . . . .

Priced only a few dollars apart. Every Universal Gas Range is a quality product. The same attention is given the lowest priced range as to the magnificent double-oven model. Workmanship, construction, durability and operating excellence are all in . . .

. . . THE LP RANGE THAT FITS ANY PURSE



The Famous MARLBORO

The Beautiful SHEFFIELD

The Smart ETON

The Space Saving MANHATTAN

The Kitchenette GOTHAM

Guaranteed by Good Housekeeping

For Full Particulars Write to—

CRIBBEN & SEXTON CO., 700 North Sacramento Blvd. Chicago 12, Illinois

FOR 77 YEARS THE UNIVERSAL SELECTION OF COOKING PERFECTION

F. FETHERSTON

SI DARLING

could forecast what the saturation point would be for the industry; that it was the same as in the early days of the auto industry when few had the vision to guess correctly how important the automobile would become.

As an example of how the industry could do things better, photographs were passed around contrasting the sloppy appearance of a certain bulk plant with the clean, snappy impression made by the building of a nearby electric utility.

Mr. Neumann showed an advertisement of American Airlines, as indicating how a specific company can tie in with a national effort of an industry. This ad asserted that winter travel is best by air, and that American Airlines offers the best air travel.

In the same way an industry cooperative advertising program could stress that LP-Gas is the best fuel, while an individual operator could tie in locally with the thought that "Flash Gas is the best LP-Gas."

A motion was passed in favor of staging a fire control and extinguishment demonstration in connection with the meeting in San Francisco of the National Fire Protection Association.

Howard D. White, executive vice president of LPGA, opened the meeting as chairman with a discussion of the plans of District 8, the new Canadian district of the association. M. E. McLean, chairman of the Canadian district, who had come from Canada for the Atlanta meeting, explained the need for a little more autonomy in Canada than is enjoyed by the other districts.

The Board approved a line of action suggested by the marketing committee, having to do with securing more adequate statistics and marketing information about the industry.

Franklin R. Fetherston, vice president, technical division, discussed the status of the standards for installation of gas piping. The standards, he said, are still under consideration by both LPGA and AGA representatives, and the effort will be made to make them cover all installations of all piping for all kinds of gases.

Will Attend London Conference

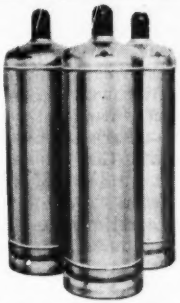
Mr. Fetherston also discussed plans for the Compressed Gas Assn. to represent various associations in this country, including the LPGA, at the meeting of the International Standards Organization in London toward the end of April.

Taking an active part in the Atlanta meeting, also, was Arthur C. Kreutzer, secretary of the LPGA.

K. R. D. Wolfe, chairman of the educational committee, reported that despite bad storms in the West, a total of 206 had registered for the Rocky Mountain Empire LP-Gas school, held Feb. 7-9 in Denver, under direction of Foster Mabee.

Dates of Sept. 7-9 have been set for the second Eastern LP-Gas service school. The Southeastern LP-Gas service school, under direction of Fred Rives, was scheduled for March 20-25 at the Technical Institute of Georgia Tech, at Chamblee, Ga., a suburb of Atlanta. Contact had been made with the University of Minnesota, Minneapolis, regarding a school to be held there this summer. By the

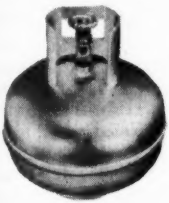
MASTER TANK DELIVERS PROMPTLY



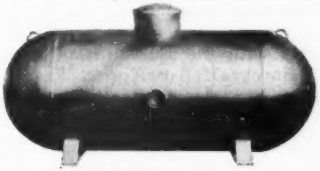
100# I.C.C. CYLINDERS
Tare Wt. 132 lbs.
Diameter — 14⅞"
Height — 45½"

Continual improvement in both product design and production facilities enables Master Tank to maintain their leadership in both quality and ability to deliver your requirements from 20-lb. Cylinders to 30,000-gallon Bulk Storage Plants.

All Master Equipment is built in strict compliance with I.C.C., API-ASME and ASME codes — automatically welded, x-ray controlled, hydrostatically and air tested, and fully inspected by a recognized agency during fabrication.



20# I.C.C. CYLINDERS
Tare Wt. 39 lbs.
Diameter — 14⅞"
Height — 11¼"



DOMESTIC SYSTEMS

Butane Systems — U-69 construction — 101 lbs. working pressure — above or underground.

Propane Systems — U-69 construction — 200 lbs. working pressure — above or underground.

Capacity	Butane	Propane
150 gal.	24" x 6'11"	24" x 6'11"
250 gal.	30" x 7' 7"	30" x 7' 7"
288 gal.	None	24" x 13' 1"
363 gal.	36" x 7' 3"	36" x 7' 3"
500 gal.	36" x 10' 2"	41" x 8' 8"
1000 gal.	42" x 14'10"	46" x 12' 6"

200# CAPACITY
PROPANE CYLINDERS
200# W.P.
U-69 A.S.M.E.
57 Water Gallon
Capacity

MASTER TANK & WELDING

1612 Singleton Blvd. Dallas, Texas

end of 1949 it is hoped to have in operation at least four short courses.

"Your committee," Mr. Wolfe reported, "believes that the educational courses which have now been successfully started, are doing an outstanding service for the industry from a safety standpoint, and an overall technical education standpoint of the servicemen and field workers in the industry. We recommend that all in the association give their full support to the continuation of this program, as it has met with unusual success where these short courses have been conducted.

Service Schools Self-Supporting

"It is also interesting to note that this educational program is self-sustaining from a cost standpoint insofar as the association is concerned, and we intend that it be kept on that basis."

Insurance rates came up for discussion, and a conference was suggested with the Bureau of Casualty and Surety Underwriters. The suggestion also was made that it would be to the advantage of those in the industry to stay with the same insurance agency and company year after year, and get a reduction in premiums on the basis of experience.

A report of the transportation committee was referred back to the committee, with instructions that a larger proportion of distributors be placed on the committee, so that their interests could be considered in bringing down freight rates. It was suggested that dealers and railroads west of the Rockies meet to work out reduced rates in the West.

There was discussion of weights and measures in connection with a coming national meeting of weights and measures officials, at which standards for measuring LP-Gas will come up for consideration. The opinion was expressed that it will be to the advantage of the LP-Gas industry to make an effort toward adoption of such standards as will be fair to the industry.

A report by William S. Lander dealt with Interstate Commerce Commission regulation of trucks. A motion was adopted for appointment of a committee to discuss these matters with the ICC.

One of the most interesting parts of the social program at the Atlanta meeting was a trip to the noted cyclorama, through the courtesy of Hermann Paris, president of Georgia Automatic Gas Co.

The time and place of the next directors' meeting was set as the Palmer House in Chicago at the time of the annual convention, which takes place May 9-11.

Illinois Bottled Gas Appoints J. A. Jenkisson to Handle Sales

J. A. JENKISSON

B. D. Geroy, president of the Illinois Bottled Gas Co., Chicago, marketer of "Dri-Gas," announces the appointment of J. Arthur Jenkisson as sales promotion and advertising manager in charge of sales training.

Mr. Geroy stated that Mr. Jenkisson will supervise the training program which the company plans to foster for its dealers and their salesmen. The training will include product knowledge, sales training, advertising procedure and local sales promotion. The training is part of the company's large expansion program for 1949.

Water Heater Survey Shows Men Influence 91% of Sales

The AGA's general promotional planning committee issued in late February an "Action Program" specifically designed to focus all advertising, promotional, and sales efforts connected with the automatic gas water sales campaign on one set of objectives: the six fundamental appeals bringing water heater sales, as reported by Elmo Roper's organization.

Mr. Roper made a nationwide survey (not a market study) of "Public Attitudes Toward Hot Water Service." He reported that consumers were interested most (in this order) in automatic features, dependability, economy, cleanliness, the superior fuel—gas, and construction. He also found that men participated in 91% of the family decisions to buy water heaters, and should have a greater promotional effort aimed at them.

The survey, which included four geographical regions, covered one or more of the three major types of gas and three income groups, and also revealed the large role builders and plumbers play in the consumer's determination of what kind of water heater to buy. Additional information revealed that old and worn out equipment is a major source of competition and must be so recognized.

The report in essence urged greater cooperation among manufacturers in the big drive, local tie-in ads with national advertising, training courses for utility salesmen, and greater emphasis on replacing obsolete equipment.

Respondents to the survey were renters and owners of single dwelling units of one or more families in cities of more than 5000, including both owners and non-users of water heaters.

CALENDAR

All associations are invited to send in dates of their special and annual meetings for this calendar.

April 14-15—North Carolina LP-Gas Assn. Annual Convention. O'Henry Hotel. Greensboro.

April 18-19—Kansas LP-Gas Assn. Convention and Trade Show. Broadview Hotel. Wichita.

April 18-19—Tennessee Liquefied Petroleum Gas Assn. Andrew Jackson Hotel. Nashville.

April 20-22—Natural Gasoline Assn. of America. Texas Hotel. Fort Worth, Tex.

April 21-22—South Carolina LPGA. Wade Hampton Hotel. Columbia.

April 22—Butane-Propane Institute of Louisiana. Alexandria.

May 9-11—Liquefied Petroleum Gas Assn. Annual Convention and Trade Show. Palmer House. Chicago.

May 16-19—National Fire Protection Assn. Fairmont Hotel. San Francisco.

May 25. Ohio Liquefied Petroleum Gas Assn. Annual Meeting. Deshler-Wallick Hotel. Columbus, Ohio.

June 1-3—University of Tulsa Short Course. Tulsa, Okla.

June 6-10—Texas Butane Dealers Short Course. Texas A & M College. College Station.

June 9-10—Missouri LP-Gas Assn. Annual Convention and Trade Show. Governor Hotel. Jefferson City.

June 12-14—Arkansas Butane Dealers Assn. Annual Convention and Trade Show. Little Rock.

June 25-27—Michigan LP-Gas Assn. Annual Meeting. Harbor Springs, Mich.

June 26-28—Texas Butane Dealers Assn. Convention and Trade Show. Dallas.

Sept. 7-9—Second Annual LPGA Eastern LP-Gas Service School. University of Pittsburgh. Pittsburgh, Pa.

Sept. 19-21—National Butane-Propane Assn. Convention and Trade Show. Jefferson Hotel. St. Louis.

Sept. 25-27—Colorado LP-Gas Assn. Fall Convention. Shirley-Savoy Hotel. Denver.

Oct. 17-20—American Gas Assn. Annual Convention. Chicago.

Oct. 31-Nov. 4—National Safety Congress. Morrison Hotel. Chicago.

Canadian Markets Grow Despite Appliance Shortage

AT the Feb. 14-15 meeting of the 8th District (Canadian) of the Liquefied Petroleum Gas Assn. in Toronto, A. D. Palmer, chairman of the appliance committee, reviewed the difficulties encountered by Canadian dealers in obtaining a sufficient number of gas appliances to meet the requirements of their customers. This was due partly to import bans and to production shortages of manufacturers in the United States.

In a written report read at the meeting the entire problem was explained in detail and prospects for improvement in the future analyzed. Mr. Palmer's report follows:

Almost a year has elapsed since our organizational meeting. In spite of innumerable difficulties the LP-Gas industry has forged ahead and is now taking its place in the Canadian economic picture.

The comforts of gas are now within the practical reach of every Canadian whether he lives in the Maritimes, Quebec, Ontario, the Prairies or British Columbia.

The support that we have received from our neighbors to the south, engaged in the same line of endeavor, has been invaluable.

The Liquefied Petroleum Gas Assn., which coordinates all of the many ramifications of our industry, has served us well. As members of the Canadian Section of this organization, we should now take further steps to give it the strength and support it requires so that we may unite the producers, distributors and equipment and appliance manufacturers to jointly work out the proper solutions to the many problems now facing us.

The infant, practically unrecognized a year ago, is rapidly maturing. The words "propane" and "LP-Gas" have become common usage in the layman's vocabulary. We should mature as well by laying the foundation for an organization which will represent the industry and work to its common good.

The Appliance Picture

Gas Ranges. When the Government of Canada placed an import ban on appliances and equipment from the United States in November, 1947, the LP-Gas industry received quite a jolt, as almost 100% of its appliances had been imported. Since that time your appliance committee has carried on considerable correspondence and work with some meas-

ure of success, but, we must frankly admit that we have fallen far short of accomplishing what could have been accomplished. It is our humble opinion that, before we can achieve results, we must iron out sectional differences and group differences so that East and West, manufacturers and distributors, work together.

At our first meeting in March, 1948, the distributors were frankly told by appliances manufacturers that their cause was just but that nothing could be done. The distributors felt that they were being discriminated against and undoubtedly showed their frustration and impatience. On the other hand, the distributors failed to realize that each manufacturer had a substantial investment in the dealer organization that he had laboriously built up over the years, that he had to continue to serve to the best of his ability if he were to retain its goodwill and to which he had commitments which he felt obliged to carry out.

During the past year these circumstances have somewhat eased. Increasing allocations have been made to LP-Gas range production and while the number required has been far in excess of actual production, some panacea has been experienced. However, in order to ensure the adequate and healthy growth of this industry, some joint action should be undertaken by our association forthwith to provide LP-Gas distributors with an adequate supply of appliances during the coming year.

Before attacking this problem, let us consider:

A. Quantity Required. In a brief submitted to the Ministry of Finance on May 27, 1948, this committee estimated that the requirements of distributors across Canada to be 20,000 ranges for the 12-month period. This figure was arrived at by soliciting information from the major bulk distributors throughout Canada and reducing their estimates by 50%. Since the submission of this brief, actual experience has forced us to the conclusion that perhaps the original estimate of 40,000 would have been more accurate. During the 12 months ending Sept. 30, 1948, the American stove manufacturers produced 740,500 LP-Gas ranges. Reducing this to percentage of population and assuming that, in proportion, Canada could merchandise a like amount, our potential for 12 months would be approximately 70,000 ranges. To some this may sound fantastic, but there are the figures.

While we do not know, nor have we been able to find out, just how many LP-Gas ranges have been produced during the past year, we are certain that, unless positive steps are taken, the demand for the coming year will be many times in excess of supply.

B. Quality Desired. It should be remembered that LP-Gas ranges are sold almost exclusively, in the West at least, in a rural market. The type of range being produced in Canada could understandably be tailored to fit this market. Split-top or staggered burners, automatic oven control, practical elimination of apartment type ranges should be taken into consideration. While I cannot speak for the East or the Maritimes, I would suspicion that the same situation obtains there. Safety is all-important in an LP-Gas range and this should be kept in mind. Testing and standards laboratories will undoubtedly be set up in the future. Until then it will be up to the manufacturers to police their own products.

Recommendations. The Canadian distributors of liquefied petroleum gas products have come to realize that

the proper solution of their troubles rests within the confines of our own country. I would suggest that we hold a joint meeting with authorized representation of the stove manufacturers to the end that some method may be devised to increase present supplies of LP-Gas ranges. The assistance of Government will undoubtedly be required and the aid of those who are conversant with the steps required to present our problem should be enlisted.

The following items may be considered:

(a) Increasing steel supplies to manufacturers.

(b) Securing additional U.S. dollar allotments to manufacturers to permit import of component parts.

(c) Reducing per cent of range required to be of purely Canadian manufacture.

(d) Encourage American manufacturers, some of whom are interested in production in Canada either in connection with established range manufacturers or as new independents, by giving them dollar quotas to import all parts necessary and in the initial stages to import fully manufactured ranges to prove their models and complete their production program.

(e) As any of the above suggestions will of necessity require time to culminate, the import of some foreign made ranges will be essential for a short period to take up the slack. It must be remembered that in December last, restrictions were eased somewhat and some "historic" importers have been granted a quota of former imports. As the base period used for determining quotas was one when imports were relatively low and as the basis used favors a small group of importers, it is generally felt that this step will not assist us materially in our problems.

Propane Refrigerators

On August 20 and 28, last, we wrote to the Hon. D. C. Abbott concerning the importation of propane operated refrigerators, which are not manufactured in Canada. Our friend Bill Wyatt had managed to get in the thin edge of the wedge with his kerosene refrigerators and I believe, without wishing to brag, that this committee was able to push open the door. The first Servel propane refrigerators will soon be on the market. We do feel, however, that it will do no harm to press for a larger quota, as present imports are undoubtedly based on previous shipments rather than demand.

Propane Water Heaters

It is our opinion that present Canadian water heater production is adequate and that the LP-Gas industry is receiving very fair treatment. The quality of Canadian water heaters is excellent.

Heating Equipment

While the propane market for radiants, circulators, floor furnaces and central heating appliances is limited, the fact still remains that these units are required by the distributors who can market their propane at a price where it can be used for heating.

With the exception of radiants, Canadian heating unit production is practically nil—performance and safety considered. We would urge that some plan be evolved to get proper LP-Gas heating equipment into Canada.

W. H. Eskridge Made Manager Rulane Gas Co. Branch Office

W. H. Eskridge of Charlotte has been appointed manager of Palmetto Rulane Co. at Bennettsville, S. C., according to an announcement by W. S. Lander, president of Rulane Gas Co., of Charlotte, N. C.

Mr. Eskridge has been connected with the Charlotte office for several years as salesman and supervisor.

Carl Ramsey, who has been manager of the Bennettsville branch, has accepted a position in Lexington, Ky.

BELOW-ZERO DAY... *Pressure Okay!*

This is an undiluted Propane Vapor Distribution System used in serving the City of Las Vegas, New Mexico. (About 1200 customers.) Two L.P.G. Vaporizers maintain pressure on entire system. Photo taken during below-zero cold spell.

• In a letter to J. Woodward Martin, L.P.G. Equipment Corporation, Dallas, Hubert Wilbanks, plant manager of Las Vegas Gas Company, says: "...The vaporizers are wonderful, and have kept the pressure at a point that we have had no calls due to low pressure. January 29th and 30th, 1949, our temperature was 24 degrees below zero and without the vaporizers we could not have pulled through. We think it is equipment well worth the money."

Write For Folder BP And Prices!

L.P.G. EQUIPMENT CORPORATION

207 HENRY STREET • PHONE RIVERSIDE 3929 • DALLAS 1, TEXAS

Carburetion Principles

LP-Gas Compared to Gasoline for Engines

LET'S debunk this idea that the LP-Gas carburetion system is mysterious and complex. If you have that idea, it is only because the unit is unfamiliar.

In reality it is just as simple as the fuel system in a gasoline automobile. Not only simple, but step-for-step and unit-for-unit the two systems are direct parallels. If you can understand one, you can quickly learn what takes place in the other.

The only differences are mechanical. They arise from a fundamental difference in the two fuels, which makes vaporization take place at a different step in the transfer from fuel tank to engine cylinder. Both fuels must pass through two stages of pressure regulation between the tank and the point of mixture with the air stream, and both must arrive at the point of mixture in their natural states—liquid for one, vapor for the other—at atmospheric pressure.

The similarities in principle, and

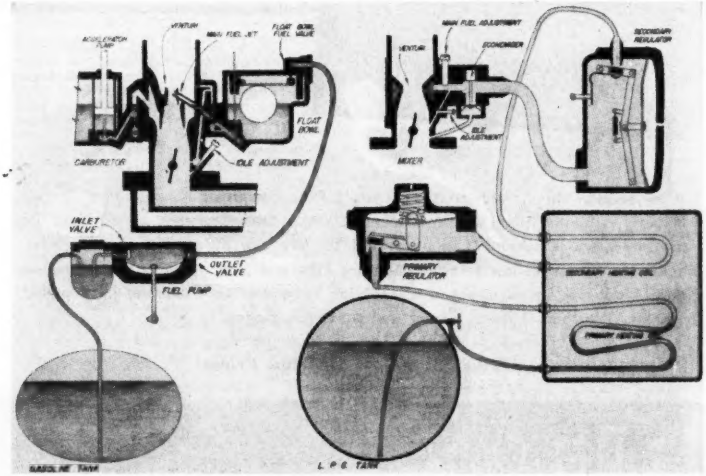


Fig. 1. Diagrammatical illustration showing comparison of and relation between gasoline and butane fuel systems for an internal combustion engine.

the differences in mechanical detail, are easily understood if we start at the fuel tanks and trace the parallels clear through the system. The successive steps are clearly shown in the accompanying diagram, Fig. 1.

In the gasoline system we handle a fuel that is normally liquid at atmospheric temperatures. We can use a tank of the simplest form. Gravity holds the fuel in the tank, and atmospheric pressure reaches it through a vent hole in the cap or the top of the tank.

Temperature Builds Pressure

The LP-Gas tank holds fuel that develops considerable pressure within itself. Where does the pressure come from? A simple, familiar comparison with water and steam will make this clear. Vapor pressure exists in water (as in all fluids) at any temperature from freezing on up. The higher the temperature, the higher the vapor pressure becomes, but atmospheric pressure overcomes it until the boiling point is reached

At about 212°F that condition is reversed—the vapor pressure overcomes atmospheric pressure, and rapid evaporation, otherwise known as boiling, takes place.

A gallon of water, when converted to steam, expands tremendously. If free to do so, it will displace more than 200 gallons of air. If a closed vessel, like a steam boiler, is nearly filled with water and heated to 100° above the boiling point of the water, the pressure becomes terrific. The water is still liquid, because it is confined within the boiler and it has no place to expand. It can only become vapor (steam) when it is allowed to expand.

Low Boiling Points of LP-Gas

LP-Gas does not boil at the same temperature as water. Its principal ingredients boil at much lower temperatures—butane at 32° (same as the freezing point of water) and propane at 44° below zero. Any time you are willing to be outdoors without your red flannel underwear you do not need to heat LP-Gas to make it boil. It is already hotter than its boiling point. At 65°F, which is like a nice spring day, propane is 109° above its boiling point, and it develops a pressure of 100 pounds per square inch. So at ordinary daytime temperatures, LP-Gas gets up a pressure like super-heated steam. and for the same reason. (See Fig. 2.)

Neither the gasoline nor the LP-Gas in the tank will get to the carburetor at the right pressure without regulation. Both fuels must be at the venturi at atmospheric pressure. The gasoline must be raised to the carburetor by a pump, and the pump must have a regula-

Compare

and You Too Will Change

To DIX

Yes . . . Compare DIX simplicity of construction and operation with any other LP-Gas Carburetion Unit available and you too will change to DIX. You will like the rugged construction, simple design and ease of installation that comes with a DIX.

Have you investigated the SUMMER LOAD possibilities of LPG carburetion? If not you should DO IT NOW.

DIX MANUFACTURING CO.
3447 E. Pico Blvd., Los Angeles 23, Calif.

FOR BETTER CONVERSIONS

Make every conversion a better installation by using an Ellis Manifold designed especially for LP-Gas. Your customers will find they get more power and mileage . . . and you will get more customers.

Ellis "Bu-Power" Manifolds have been tested and proven by hundreds of successful installations.

ELLIS MANIFOLD CO.
1708 S. Soto St. Los Angeles 23, Calif.

tor to hold the flow of fuel at a constant pressure. The regulator is built into the pump in the form of a coil spring working against a diaphragm. The pressure is set for a constant figure somewhere between 2½ and 10 pounds per square inch. It is generally near the low end of this range.

First, Through Primary Regulator

The LP-Gas system does not need a pump, because the fuel already has more than enough pressure to send it anywhere that it needs to go. We therefore put it through a pressure reducing regulator, which, like the one in the gasoline pump, operates from a coil spring working against a diaphragm. (Same principle as the pressure regulating valve on an oxygen cylinder, except that it is not adjustable. It does not need to be.) This primary regulator drops the pressure to somewhere between 10 and 2½ pounds per square inch—generally in the high end of the range.

From the first stage of regulation both fuels flow under this moderate pressure to the second and final regulator. In the gasoline system, the liquid fuel in the carburetor must be held at a constant level, just below the tip of the gasoline nozzle which goes into the venturi. This regulation is accomplished by the float, working against the float valve which receives the constant pressure from the fuel pump. The corresponding secondary regulator in the LP-Gas system is another diaphragm type, pressure reducing regulator. Since

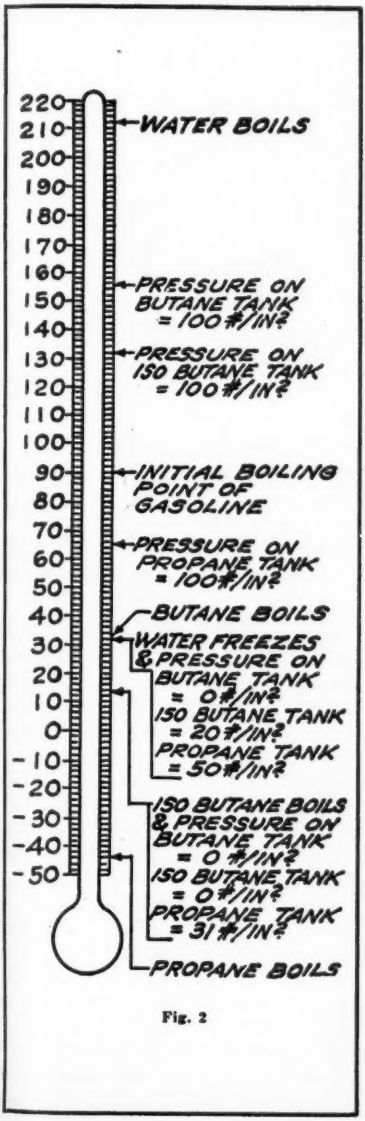


Fig. 2

the fuel is vaporized before it reaches this regulator, it handles gas instead of liquid. Like the float bowl, however, it delivers its fuel at atmospheric pressure right up to the point where mixture with air takes place. The suction produced by the air moving through the venturi then takes either fuel into the cylinders.

Combustion Principles Don't Differ

Since the laws of combustion do not differ regardless of the nature of the fuel, the principles governing the metering of the fuel apply alike to both carburetors. Special arrangements must be made to supply an idling mixture that is slightly rich in relation to completeness of combustion. At idling the throttle is nearly closed, and the flow of air is too limited to produce suction at the venturi, so the idling orifice must be at the edge of the throttle blade in either type of carburetor. Also in both there is one screw adjustment to control the throttle opening for idling speed, and another to regulate the amount of fuel that can be drawn into the manifold.

For cruising speeds, the most economical mixture is the one that provides the best *average* mixture for all cylinders (just slightly richer than for chemically complete combustion). For full power operation there must be enough fuel in the mixture to burn all oxygen out of the charge quickly and completely. This calls for a somewhat richer mixture than for cruising.

As is the case with gasoline car-

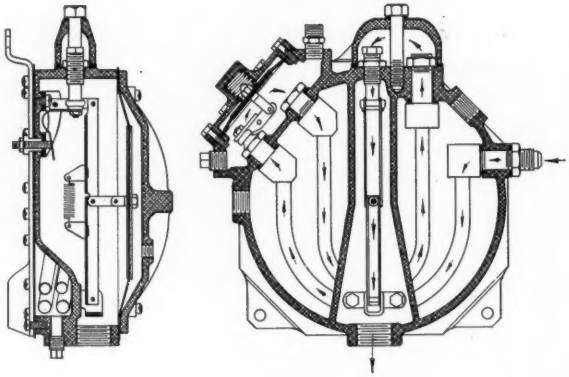


Fig. 3. Schematic diagrams of Algas carburetor, cut open to show the internal construction of heat exchanger and the two regulators, all built in one unit.

buretors, the different makes of LP-Gas carburetors employ different methods to accomplish this same purpose. In any case, and with either fuel system, these cruising and full power circuits have their individual means of adjustment. (Adjustment of gasoline carburetors is generally done by changing jets or metering rods, installing a larger or smaller size.) Most engineers do not consider an accelerating pump necessary with gaseous fuels, so this item is generally omitted. In both systems the carburetor is equipped with a choke to supply adequate fuel for cold starts.

Liquid fuel will not burn. It must be vaporized and mixed with air in order to get satisfactory engine operation. The greatest single difference between the two systems is in the location where the vaporization of the fuel takes place. With gasoline, liquid fuel is metered into the air stream. It must do all its evaporating after it leaves the carburetor jets and before the flame originating at the spark plug reaches it.

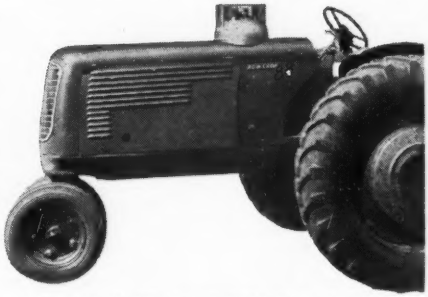
Most of this vaporization occurs in the intake manifold, although some of it happens after the fuel is in the cylinder. (This is an important consideration which will be discussed in a later article.) With LP-Gas, complete vaporization must occur before the fuel reaches the secondary regulator. In both cases

50 Models Available

Santa Fe "Custom-Built"

LP-Gas tractor tanks are now available in 50 separate models. Engineered to make installation on tractors fast, simple and inexpensive, Santa Fe tanks give custom design at reasonable prices. Many models carried in stock . . . others fabricated immediately.

- Tanks shipped from factory with brackets.
- Licensed and bonded in ALL STATES where required . . . all valves listed by UL.
- All tanks built . . . ASME—U-69, according to N.B.F.U. pamphlet 58.



The *Santa Fe "Custom-Built"* tank on the Oliver "88" shown here illustrates one of our most popular tanks. Write for catalog and price list of all our models.

Santa Fe Engineering & Equipment Co.

3812 Fruitland Ave.
Maywood, California

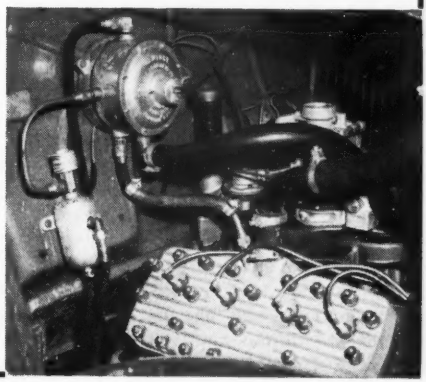
CENTURY

for Better!

LP-GAS CARBURETION

for

- *Simplicity*
- *Better Starting*
- *Fuel Economy*
- *Power*



Picture shows a typical Century installation.

Century Gas Equipment Co.

Lynwood, California

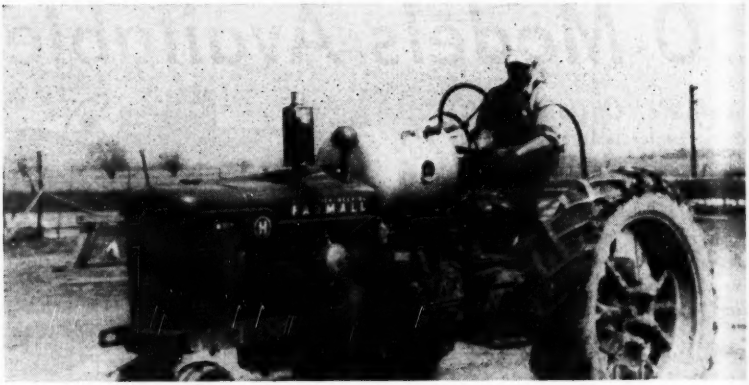


Illustration of a tractor conversion unit using Century equipment.

we require the right amount of heat in the right place.

Any fluid metering system must be built to meter liquid or vapor—it must be one or the other—it cannot serve for both. You know what happens on a real hot day if gasoline vaporizes before it gets through the carburetor jets. You call it vapor lock, and plenty of other names not so nice. The portion of the gasoline that has vaporized too soon occupies something over 200 times its original liquid volume. You could not possibly get enough through those jets to produce a combustible mixture. Hence, the heat in the gasoline fuel system must not be applied until after the fuel leaves the carburetor. We generally produce the necessary heat by circulating the exhaust gases around the intake manifold.

In the LP-Gas carburetor you have the reverse of this condition. You are metering vapor, and must not have any liquid fuel present. Vaporization begins at the primary regulator, which drops the pressure to something below 10 pounds per square inch. The propane in the mixture starts evaporating, which lowers the temperature of everything thereabouts—like your hands get cold when you wash them in gasoline, or like your refrigerator works.

Must Keep Fuel Vaporizing

Unless controlled, this lowering of temperature is likely to keep the butane (boiling point, 32°) which is in the mixture in its liquid state. If such liquid got to the carburetor, it would be very wasteful, and the air-fuel mixture might even to be too rich to burn. That

would be "liquid lock" instead of vapor lock, but as far as the engine is concerned the result would be the same—it would stop.

Hence, it is necessary to supply heat to the LP-Gas fuel system to insure complete vaporization before the fuel reaches the secondary regulator. The customary source of heat is to by-pass part of the water flowing from the engine to the radiator. This is put through a heat exchanger through which the fuel flows in copper tubes. The evaporating fuel cools the water exactly as much as the water heats the fuel.

Converters Built Into Units

In the LP-Gas system these heat exchangers are generally called "converters," because they convert liquid to vapor. They are ordinarily built into the same unit as one or both of the pressure regulators (See Fig. 3), and for the sake of convenience the combined unit is spoken of as a "converter," just as the combined gasoline pump and regulator unit is called a fuel pump.

There you have a story. You start with liquid fuel in the tank, and you end up by burning a mixture of fuel vapor and air in the cylinder of the engine. To accomplish this you put either fuel through all of the same steps, in the same order throughout the cycle, with the single exception of the step in which the heat is applied. But that is not a separate step—it is a part of the step in which vaporization takes place. So why all the confusion?

Special Tank Mountings Made For 50 Tractor Models

One of the major problems that confronts anyone converting a tractor to LP-Gas operation is the mounting of the fuel tank. Where should it go? How large should it be? How should it be designed?

Most of these perplexing problems have been solved by one enterprising West Coast tank manufacturer who decided several years ago to lick the problem—and did.

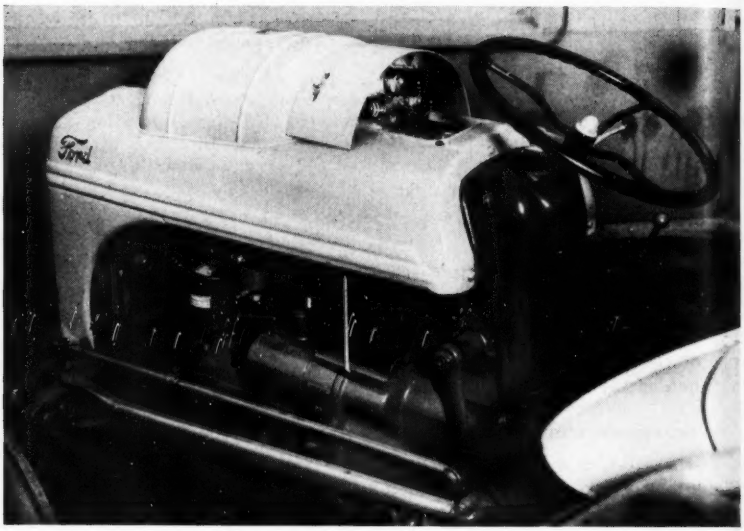
This tank fabricating concern—Santa Fe Engineering & Equipment Co., of Maywood, Calif., have found the answers by studying every well-known make of tractor on the market and designing LP-Gas tanks that can be mounted quickly and inexpensively. Santa Fe now has over 50 models designed specifically for popular make tractors. Such well-known makes as International, Minneapolis-Moline, Case, John Deere, Oliver, Ford, and many others have long been in Santa Fe's catalog.

Designs Based Upon Research

The information necessary to design for these many models was obtained only after many days of field research by members of the firm. In fact, most of the data were obtained by the company's head, H. D. Robinson, who has traveled to many states over a period of several years to gain the information needed.

The location of the tank on each model usually has offered one of the most perplexing problems. Once this has been decided upon, the design, fabrication and fitting is merely a matter of time. And doing this for 50 models has taken plenty of time, as Mr. Robinson will affirm.

One of the most satisfactory triumphs came with the successful



Newly designed LP-Gas fuel tank for tractors. The Santa Fe Engineering & Equipment Co., Los Angeles, has different models for all makes of tractors.

adaption of an LP-Gas tank to certain models of the International Farmall. The problem was in the space occupied by the steering column. It was solved by welding a sleeve into the tank and passing the steering column through it. There are hundreds in operation now and it is standard practice, Mr. Robinson states.

One of the company's most recent models is the newly designed tank for the Ford tractor, shown in the accompanying illustration.

As with a majority of models, it is mounted in place of the gasoline tank. To do this, it is necessary to cut out a large hole in the hood. This, of course, has to be done with fine precision if mounting brackets are to fit and to allow the hood to set firmly in place.

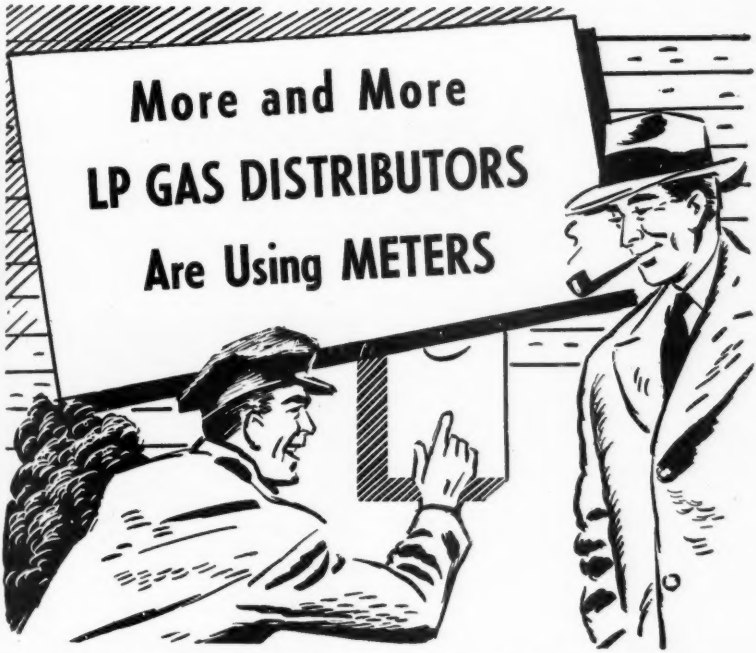
Of course, the tank includes brackets with matching holes, as well as the rubber trim (and sealing compound) to cover cut edge of hood.

Capacity for the Ford tank is 15½ gal. w. c. Valves include visable float gauge, 1¼ in. filler, ¾ in. vapor return, ⅜ in. (SAE) liquid fuel, ¾ in. vapor fuel, safety valve and 10% valve.

Geo. H. White Passes Away

Geo. H. White died late in December in Little Rock, Ark. He was the father of several individuals active in the Arkansas LP-Gas industry.

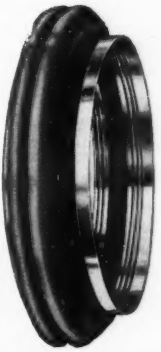
His children are Reiff White, Morrilton; Jack White, Little Rock; Rex White, Stuttgart, and Mrs. B. T. Harris.



As the LP-Gas industry grows by leaps and bounds, the trend toward metering is increasing. The customer likes evidence of value received.

Wherever meters are used, remember there's nothing to compare with VULCAN Diaphragms for helping to keep meters accurate. The LP-Gases dry out and cause failure of leather diaphragms. VULCAN Diaphragms remain soft and flexible, do not dry out and stiffen. Yet VULCAN Diaphragms require no oiling or other attention.

Join the trend to metering — and insist on VULCAN Diaphragms in your meters.



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Well Surging Operator Thinks LP-Gas Best for Power

By JAMES JOSEPH

WHEN it comes to surging—a water well developing and testing operation that strains even the biggest internal combustion engine's rated horsepower—there's nothing like LP-Gas.

Wilson Engine and Equipment Co., Bakersfield, Calif., is the authority for this statement and ought to know. The company has specialized in industrial engine installations — both Chrysler and Climax—most of them fueled by butane and propane. The Wilson company has plenty of practical reasons for its partiality to LP-Gas. First among these is its power production over the long-haul, ultimate-power surging operations.

All of which should open a highly profitable balance-load field for LP-Gas suppliers, considering that in well surging, a single engine will gulp down 500-gals. per 24-hour run.

Well surging is a good and profitable business—but the initial investment is high. What is required, for example, is a 300-400 hp., internal combustion engine, such as the Climax V-330, V-8, with 2155 cu. in. displacement. With its giant power plants mounted on special trailers, and 500-gal. propane tanks attached to the truck bed, Wilson Engine Co. is

Louis Olsen, Wilson Co. repairman, has installed plenty of LP-Gas heat exchangers, like the one he's repairing here on a Buda engine.

able to take on the toughest of well provings—a job which tears the spirit out of less hardy equipment.

Surging is the operation by which a newly drilled water well is cleansed of sand and brought up to maximum production in a few hours—or perhaps days. The surging process not only proves a well's hourly maximum flow in a matter of a few days, but calculates permanent pump size needed, and most important, saves more easily damaged equipment which can't take the sand treatment given by a new-born well.

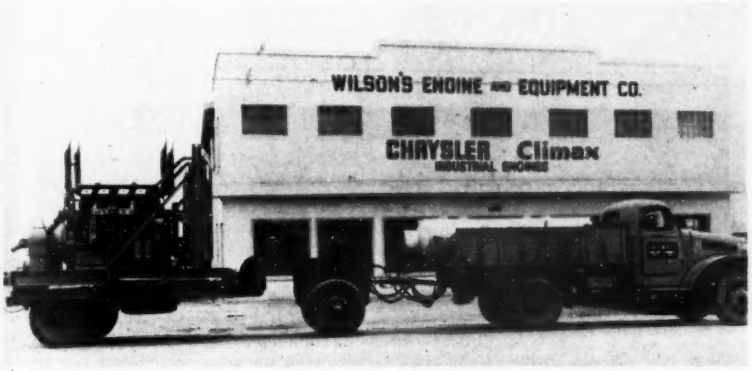
For about $250 per 24-hour run, Wilson company will move one of its big surging engines over the new well, suck out the sand and foreign matter, and advise the customer just what size permanent pump will do a maximum job.

Surging engines—in this case a Climax V-330—need terrific power, power that can be regulated and strained to maximum. That's why an internal combustion—not diesel nor electric—engine is used.

Electrical engines, for instance, have one rated maximum output; besides, they can't bear the surging strain of the sucking operation. Since most jobs are out of reach of local fuel supplies, Wilson adapted the propane-fueled Climax for its work. Besides, it's a real economy engine—considering the work done—and gets 10 hp. hours per gal. using propane.

With a tremendous, instantaneous surge of power, the engine sucks up the well's contents, then shuts off power, and lets the water and sand fall back into the well again. The well is opened, sucked clean of sand, and maximum water flow established.

To test for maximum water flow, the Climax is given full throttle



Wilson Engine Co.'s huge, 400 hp Climax rig and 500-gal. propane tank (on truck), prior to leaving for surging operation on water well.

until it practically sucks the well dry—pulling out more water than the well can supply. Gradually the engine is throttled down until water flow equals pump output. This proves the gallons-per-minute well output, determines size of permanent pump necessary, and saves fragile pumps.

Consumes 500 Gallons Daily

At maximum operation, 24-hours continuous surging—which is the usual technique—the rig consumes over 500 gallons of propane.

As an extra load-getter (Wilson company buys all its LP-Gas from local distributors), the surging process is a year 'round good bet.

Wilson Co. officials, Hollis V. Wilson, owner, left, and Clayton Brawdy, general manager, right, look over a Climax engine before hooking it up for LP-Gas.

Wilson company puts LP-Gas to use in other engines, principally in pre-irrigating rigs, on a rental basis. The company has three rental irrigation engines—all using LP-Gas. Biggest months for pre-irrigation in the Kern county-Bakersfield area are December and January, but there's also a constant call for rental engines year 'round. Engine rigs and butane tanks are trailer-transported.

Wilson company's owner is Hollis V. Wilson and its general manager, Clayton Brawdy. Both men have geared their engine operation to LP-Gas—not only because of portable requirements, but because of low fuel costs per job.

That a specializing concern makes it a business to install LP-Gas engines — with special emphasis on surging operations — ought to point the way for LP-Gas distributors seeking extra-load builders—plus operational profits.

News Story Failed to State Full Name of Colorado Co.

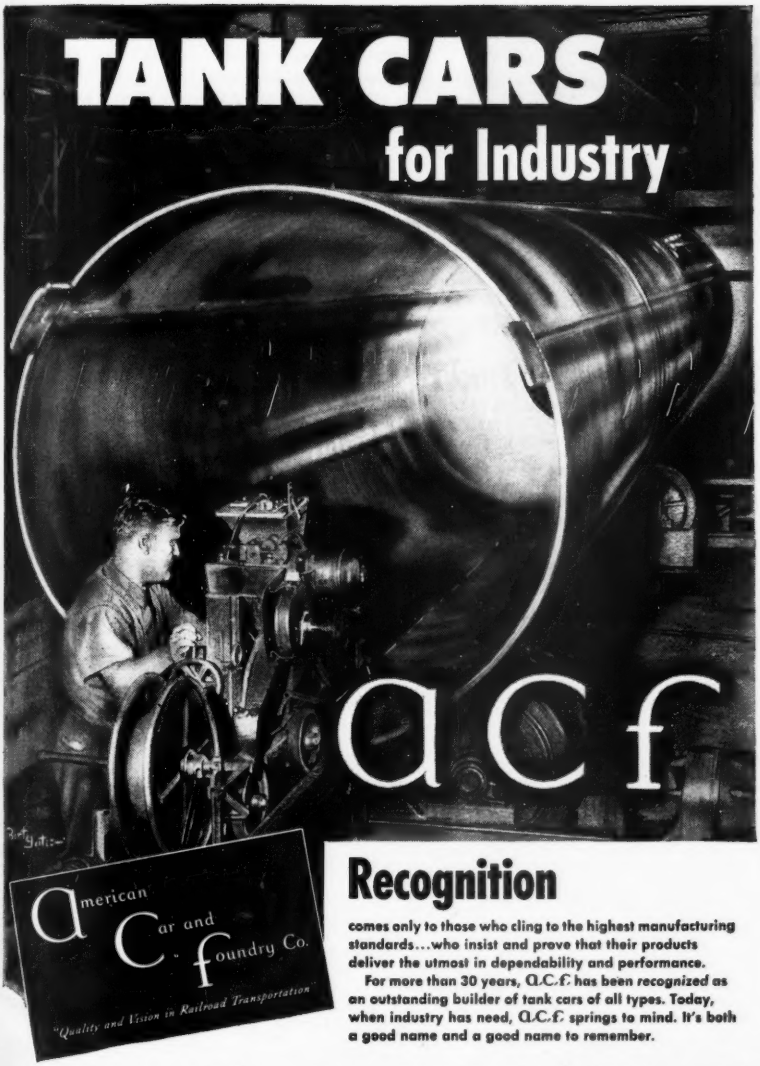
Last month a story appeared in BUTANE-PROPANE *News* regarding the installation of LP-Gas at the winter resort named "El Rancho Colorado."

Credit for the installation was given to the "Natural Gas & Fuel Co.," of Denver.

Of course, this should have read the "Colorado Natural Gas & Fuel Co." the company directed by F. N. Mabee, former president of the Colorado Liquefied Petroleum Gas Assn.

Probably everybody from the Denver area knew to whom the reference was made but this will set the record straight.

TANK CARS for Industry



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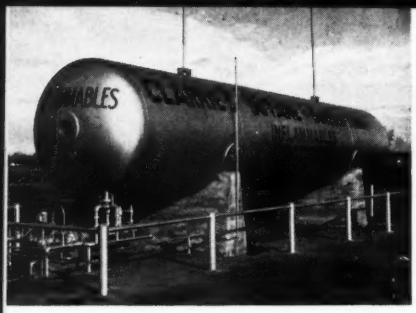


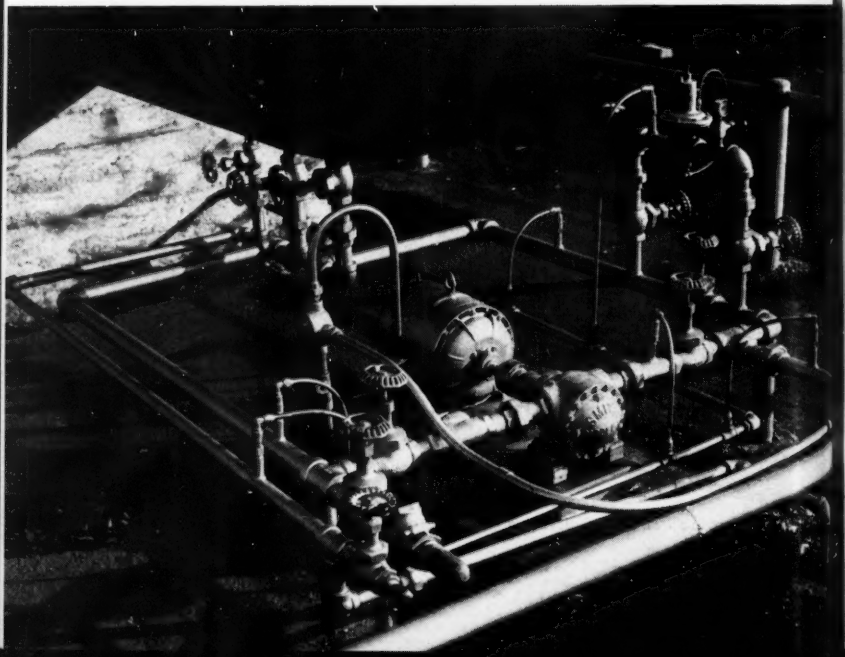
Super-Service For Highway Trucks

The photographs show (top) the storage tank, piping and guard rail, and (bottom) detail of piping and the Smith pump.

CATERING primarily to highway trucks burning butane and propane, Clark's newly established station in Redding, Calif., is a notable example of the progress being made in designing this type of operation. The installation was made by Ransome Co., Emeryville, Calif.

The storage tank has a capacity of 10,000 gallons, according to Rudy Wagner, Ransome manager, and the station frontage totals 500 feet along the highway. A complete, 24-hour service is provided for all types of trucks.

"Clarkie," as he is locally known, has been in business in Redding a long time and ran a station across the street before obtaining a lease at the present site from the Richfield Oil Co. Richfield is completing a similar plant in Fresno, Calif.



Efficient...

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by AMERICAN-Standard

BUDGET Automatic Storage Water Heater — Has fuel-saving cast iron blue flame burner and safety controls. Center flue with spiral baffle insures quick recovery. Mineral wool insulation between heavy galvanized steel tank and trim white enameled jacket prevents heat loss, increases efficiency. Comes in 20, 30, and 40 gallon capacities.

■ American-Standard Heating Equipment for liquefied petroleum gas has achieved an outstanding record for efficiency. Backed by research and production facilities that are second to none, American-Standard products are noted for satisfactory performance, attractive appearance, and sturdy construction. That's why they are so easy to sell . . . that's why they give such lasting customer satisfaction. For information about the complete line, contact your Wholesale Distributor. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pa.

SENECA Winter Air Conditioner — A quality unit built for long service. Has copper-bearing steel heating element which resists corrosion and rust. Baffles in large radiator conduct gases through three passes, heating entire radiator thoroughly before gases enter flue. Dependable cast iron ribbon burner saves fuel. Comes in five sizes.

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PRODUCTS

Domestic Range

Cribben & Sexton Co., 700 N. Sacramento Blvd., Chicago.

Model: Universal Berkshire.

Description: This is one of the "Balanced Line for '49" introduced by Universal at the Chicago Furniture Mart and features a waist-high broiler. A four-burner divided top model, the range has simmer-save burners with horizontal simmer flame and white individual plate size burner bowls and grates.

Other features of the Berkshire include: one-piece main top down through the manifold; a lamp styled with fluted glass shades; split-minute turner; convenience outlet; chrome bezel in the back guard; 17-in. oven with one-piece lining; oven light; and utility drawer.

The waist-high broiler has a whirlpool broiler pan and monel-mesh radiant burner.

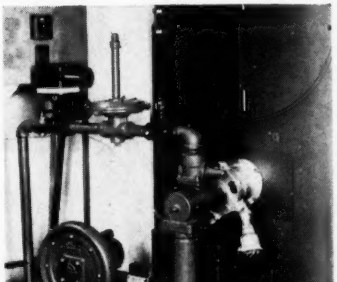
Burner Assemblies

Bryant Industrial Division (Affiliated Gas Equipment, Inc.), 1020 London Road, Cleveland, Ohio.

Model: Series "BB."

Application: Complete automatic burner assemblies for gas-firing boilers from 10 to 180 hp.

Description: To complete the installation of these pre-engineered elements of the packaged boiler burners, only gas piping and electric wiring are



needed. Basic element is the Bryant "Pow-R-Sembly," which includes constant pressure blower, single or double burner nozzles (each with compact proportional mixer), zero regulator, motorized air valve, electric ignition pilot, and manual reset safety gas valve.

The unit contains steam pressure controls, or remote thermostatic control, or both. The boiler burners operate automatically over three steps of heat output. For light loads, the pilot operates, while the main burner automatically takes over at "low fire" or "full fire."

Diaphragm Valve

White-Rodgers Electric Co., 1209 Cass Ave., St. Louis, Mo.

Application: A small diaphragm gas valve, its size makes it usable in a variety of gas-fired applications where standard sized diaphragm valves cannot be used.

Description: Length dimensions of the valves are identical with solenoid valves of the same pipe size; they are furnished in ½ and ¾ in. pipe sizes. Valves operate on 24 volts; other voltages also available. A manual operation permits opening in the event of a power failure; automatic operation will return when power goes back on.

The valves may be readily dismantled for cleaning or replacement. They are available for LP-Gas on special order.

Steel Housing

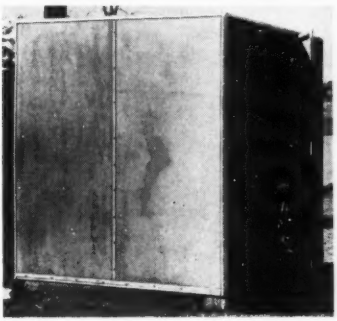
Petroleum Engineering Corp., 122 S. Michigan Ave., Chicago, Ill.

Model: Erect-O-House.

Application: Sectional, all-purpose steel enclosure for use as tool house, pump house, valve house, office, etc.

Description: Base unit is 6 ft. x 9 ft. x 6 ft. 6 in. Framing is of cold-rolled electro-galvanized ⅛-in. steel; sheets are of 24-gauge stretcher level. Roof has 2½-in. camber. Doors are complete; windows are of Sunray plastic; louvers are optional and may be located anywhere.

Door and window locations may be placed in any of the 36 in. x 78 in.



panels. Step-by-step drawings and instructions for assembly are furnished with each housing, which may be assembled with ordinary hand tools. Building is readily disassembled or additions are possible.

Excess Flow Check Valves

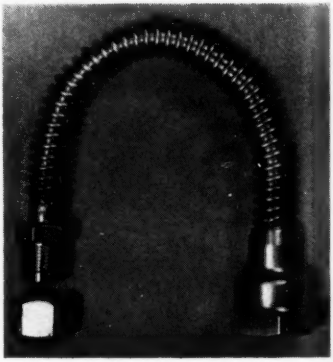
Selwyn-Landers Co., 4709 E. Washington Blvd., Los Angeles.

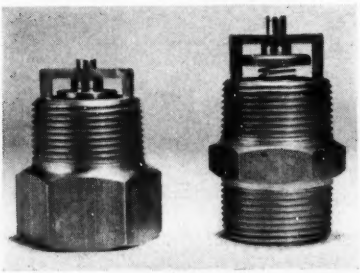
Model Nos.: 548L—1¼" x 1¼" male pipe thread both ends; 789L—1¼" male x 1¼" female pipe; 582BL—1¼" male pipe x 1" female pipe; 582AL—1¼" male pipe x ¾" female pipe.

Application: Because large capacity pumps require greater capacity excess flow checks, maximum pressure differentials permitted by Underwriters' Laboratories Inc. are used in the design of S-L excess flow checks. Used on bulk plants and on tank trucks for liquid and vapor lines where positive shutoff is installed adjacent to excess flow checks. Their function is to snap shut if the flow in one direction exceeds the designed capacity.

Description: The 548L excess flow check with 1¼" male pipe thread outlet connections permits fitting arrangements to be made up as closely as when a globe or angle valve such as the Lunkenheimer check 400 is used. The flow capacity is approximately 37 gallons liquid propane per minute with a pressure differential of 9.3 lbs. which almost equals the capacity of many 2" size excess flow checks. The flow capacity on propane vapor at 100 psi inlet pressure with the check in a vertical position is over 13,000 cfh with a 9.3 lb. pressure differential.

Complete flow valve data on Selwyn-Landers excess flow checks described above, and on other models, will be supplied upon request.





Metal Hose

Johnson Metal Hose, Inc., 226 Mill St., Waterbury, Conn.

Application: Flexible metal hose for connecting bottled gas ranges to supply line.

Description: The hose is made from a seamless tube without joints or packing of any type. It is vacuum tight, and can be flexed any number

of times in the smallest possible diameter without collapsing in any manner.

Fittings are welded to each end. One end has ¾-in. NPT plain female connections; the other has an SAE fitting for ½-in. OD copper tube. The loose nut is a flare type fitting for use with ½-in. OD copper tube.

Oven Pyrometer

Assembly Products Inc., Main at Bell St., Chagrin Falls, Ohio.

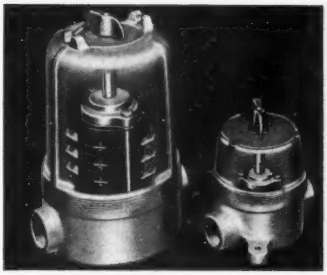
Model: 1654-B.

Application: Shows oven heat without opening oven door.

Description: This heat measuring instrument is electrically the same as the model 1654-A introduced some months ago by Assembly Products. The new model is available in a hand-rubbed, maple carrying case, with hinged cover and lock and leather strap handle.

It has a thermocouple wire 5 ft. long, and measures temperatures from zero to 750° F—400° C.

The carrying case, alone, is offered to owners of the Model 1654-A.



Snap Switch

Electro Switch Corp., Weymouth, Mass.

Model: "P."

Application: A quick-make, quick-break, rotary snap switch in explosion-proof, dust-tight, vapor tight-weatherproof housings.

Description: Housings are standard Crouse-Hinds type EMS cases, with an aluminum dome, which screw onto a castiron base. Standard conduit connections—¾ and 1 in.—are provided.

Style 30H is rated at 30 amp, 500 v a-c, 250 v d-c. Style 10H, for surface mounting only, is a 10 amp, 125 v a-c switch.

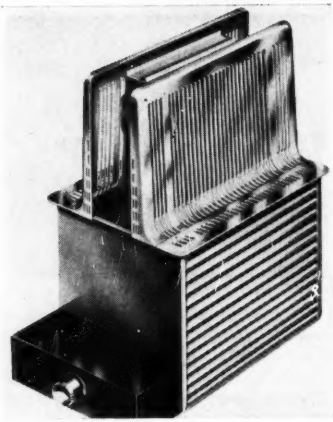
Floor Furnace

Viking Manufacturing Corp., 1747 Chester Ave., Cleveland, Ohio.

Model: 550-D.

Application: This floor furnace may be installed between two rooms and equipped with diverter.

Description: Has narrow floor grille that fits easily into space between rug and wall. Available with automatic



pilot and thermostat operation for use with manufactured, natural, and mixed gases as well as LP-Gas.

Is 28¼ in. long, 21¾ in. wide, 22½ in. high. Draft diverter is 7⅛ in. Btu/hr. input: 50,000; output, 35,000. Overall wall opening is 30¼ in. x 21⅝ in. high. Gas inlet size is ½ in.; flue size, 4 in.; approximate shipping weight, 190 lb.

Viking also maufactures three other models of gas-fired floor furnaces, including two flat register types.

Leak Detector

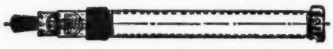
Gas Appliance Stores, Inc., 706 Harden St., Columbia, S. C.

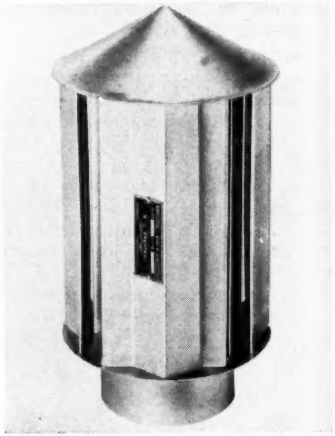
Model: Leak Detecto Brush.

Description: Pressure on the brush tip depresses a valve and releases bubble-leak detecting fluid from the container-handle. The aluminum handle holds enough fluid (readily obtainable) for a complete day's operation and is easily refillable.

The compact brush is easy to carry, fitting a man's hand, does not leak, and can be used with any soap bubble solution. Special "Detecto Solution," which has been used successfully at 40° below zero, is a formula containing aerosol and glycerine and is manufactured by American Cyanamid Co.

Device has been field-tested with satisfactory results.





Flue Cap—Chimney Top

G. C. Breidert Co., 3129 San Fernando Road, Los Angeles, Calif.

Model: Breidert Air-X-Hauster.

Application: To provide ventilation for gas heaters no matter which way nor how hard the wind blows.

Description: Operates on aerodynamic principle which makes any wind striking flue cap or chimney top cre-

ate a partial vacuum inside apparatus, thus sucking smoke and fumes from stack.

Sizes for vent flue caps: Vent sizes from 3 to 10 in.; approximate shipping weight, 3 to 20 lb. Chimney tops: Vent sizes from 8 to 18 in.; approximate shipping weight 20 to 155 lb. Fabricated from sheet aluminum or C. R. steel for vent flues, and sheet steel for chimney tops. Can be furnished in galvanized sheet steel, copper, stainless steel, or as ordered.

Gas Torch

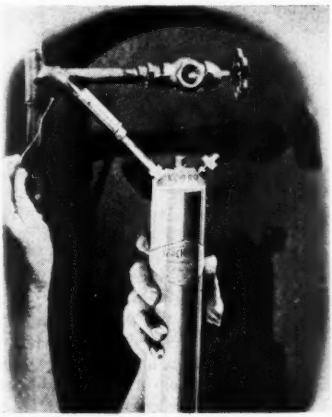
Industrial Engineered Products Inc., 7416 Melrose Ave., Los Angeles.

Model: Torchmaster.

Application: For light brazing, all types of soldering, other heating operations requiring a torch.

Description: Operating on LP-Gas, the "Torchmaster" is 2¼ in. x 13 in. in dimensions, and holds enough fuel for an average day's steady burning. It is operated by single valve control, and has a filtered "Wind-Pruf" burner which will not clog or blow out, enabling the Torchmaster to be used at any angle. The flame is adjustable.

The Torchmaster comes in two styles, one without a filling adapter, the other with an adapter and having a baked enamel finish.



Fire Extinguisher

Ansul Chemical Co., Marinette, Wis.

Model: "Emergency Fireman."

Application: This small dry chemical extinguisher has been designed for effective use by inexperienced operators to provide maximum protection for flammable liquid and electrical fires.

Description: The Ansul "Plus-Fifty" dry chemical is non-toxic, a

non-conductor of electricity, non-corrosive and non-abrasive. It will not deteriorate, solidify or evaporate, eliminating periodic recharging. It is rechargeable immediately after use.

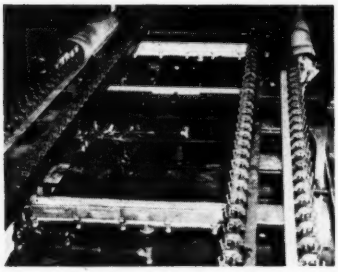
The fill cap on the extinguisher is built into the mounting bracket. This makes it ready for instant use the moment it is removed from the bracket. The "Emergency Fireman" contains two pounds of the dry chemical.

Infra-Red Generator

Process Heating, Inc., 346 Warren St., Brooklyn, N. Y.

Application: A gas-burning infra-red generator with flameless, practically 100% combustion.

Description: Made of cast iron segments, it can be enlarged up to 12 ft.



in length in inch increments. The port permits burning all gases—manufactured, natural, mixed and LP-Gases —against a ceramic which becomes incandescent, generating infra-red rays and convected heat or hot air.

The manufacturer states that the generator has an exceptionally high heat release.

Heating Control Handbook

The Minneapolis-Honeywell Regulator Co. is now offering a second edition of its heating control handbook for the installer and serviceman to firms employing qualified servicemen. The handbook covers much essential information on all phases of automatic controls for gas and oil burner installers.

Its 72 pages are filled with suggestions helpful for solving installation and service problems and deal with definitions, code identifications, control circuits, wiring diagrams, trouble shooting, thermostats, gas valves, typical gas control systems, and installation and service tips.

Specific information on liquefied petroleum gases is given in the gas burner control section.

A handbook for each serviceman may be obtained by writing the Minneapolis - Honeywell Regulator Co., 2618 Fourth Ave. South, Minneapolis, Minn., and stating the name of your firm, its address, the type of heating equipment sold or serviced, and the number of servicemen employed.

Gas Burner Catalog

Surface Combustion Corp., Toledo 1, Ohio, has released a new industrial gas burner catalog which describes high and low pressure equipment for all common gaseous fuels.

The catalog presents the more than 60 types of burners in 600 sizes supplied by Surface, and in addition contains data on the selection of burners for most industrial heating services with the various fuels. An engineering data section on furnace design and heat input requirement calculations has been included in the catalog, which contains more than 130 pages. Copies may be obtained by writing to the company.

Today's Customers Demand

QUALITY *at a* REASONABLE PRICE!

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Hearth Glo Gas Heaters are built and priced to make money for you in just such a market. Their quality is backed by our 71 years of experience. Many merchants tell us they are priced to deliver the best all-around *value* available today. And now, in new, modern design and trims — they are more attractive, more action-compelling, *more salable*, than ever!

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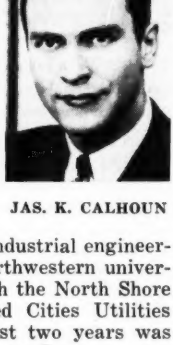
THE TRADE



JAS. K. CALHOUN

James K. Calhoun has joined **The Bastian-Blessing Co.**, Chicago, as a sales engineer for "Rego" welding and cutting equipment, according to a recent announcement from Ellsworth L. Mills, vice president.

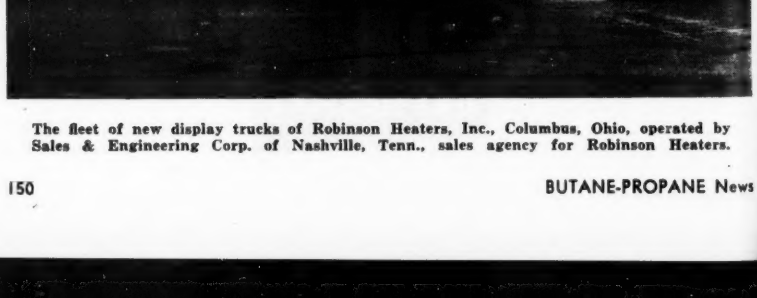
Mr. Calhoun, an industrial engineering graduate of Northwestern university, has served with the North Shore Gas Co. and United Cities Utilities Co., and for the last two years was secretary of Metrogas, Inc.

Edmund Pfeifer, member of Coatesville district sales staff of **Lukens Steel Co.**, on April 1 will become assistant district manager of sales of the Boston, Mass., office of the company, according to an announcement by J. Frederic Wiese, vice president in charge of sales. He will assist H. G. Austin, who will continue as manager of sales in the Boston office.

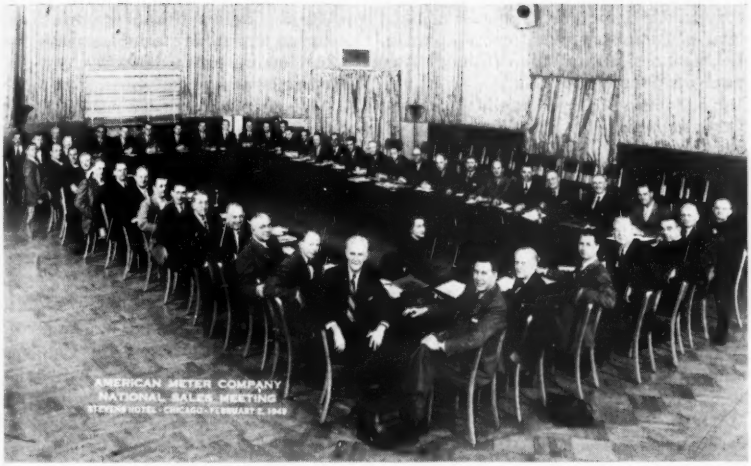
At the same time, Charles H. Pyle will take over the territory in York and vicinity formerly handled by Mr. Pfeifer. Mr. Pyle will continue to operate out of the Coatesville district sales office.

A fleet of display trucks, "show rooms on wheels," is employed by **Robinson Heaters, Inc.**, Columbus, Ohio, for presenting its line of "Radaire" gas heaters to the trade. They are operated by **Sales & Engineering Corp.**, Nashville, Tenn., sales agency for Robinson Heaters.

Each unit is attractively fitted



The fleet of new display trucks of Robinson Heaters, Inc., Columbus, Ohio, operated by Sales & Engineering Corp. of Nashville, Tenn., sales agency for Robinson Heaters.



This is the group that dined and discussed new selling procedures, engineering and customer service at the national sales meeting in Chicago Feb. 2 of the American Meter Co. The place was the Stevens hotel and 35 were in attendance.

with venetian blinds, drapes, and leather upholstered seats. The exterior is finished in gray and dubonnet.

The company believes that its show rooms on wheels, now in operation throughout the country, are the most effective means yet devised for displaying its complete line of heaters.

ROBT. C. BRADLEY

Robert C. Bradley, for the past three years associated with the **National L-P Gas Institute, Tulsa, Okla.,** as engineering consultant and director of text preparation, is now affiliated with Texas Natural Gasoline Corp., Tulsa, and Dallas, as LP-Gas sales engineer.

Mr. Bradley will continue in his capacity as a consultant for the Institute.

Prior to his work in the Institute he had broad experience in natural gasoline plant design, construction, and maintenance for various gas producing, engineering and plant construction firms, and has gained wide recognition as an authority in such matters.

Anco Manufacturing & Supply Co., of Tulsa, engineering and supply firm, has recently expanded its well known sales bulletin, "The Anco-Gram," into a 4-page, monthly, news letter of information and data on LP-Gas equipment, engineering tables, answers to special sales and installation problems, as well as general industry news.

Of special interest is the current series of articles concerning the his-

tory and future of the liquefied natural gas industry, written by John L. Locke, president of the National Butane-Propane Association.

Edited by B. C. Woodall, Anco advertising manager, the AncoGram is mailed free to LP-Gas dealers upon request.

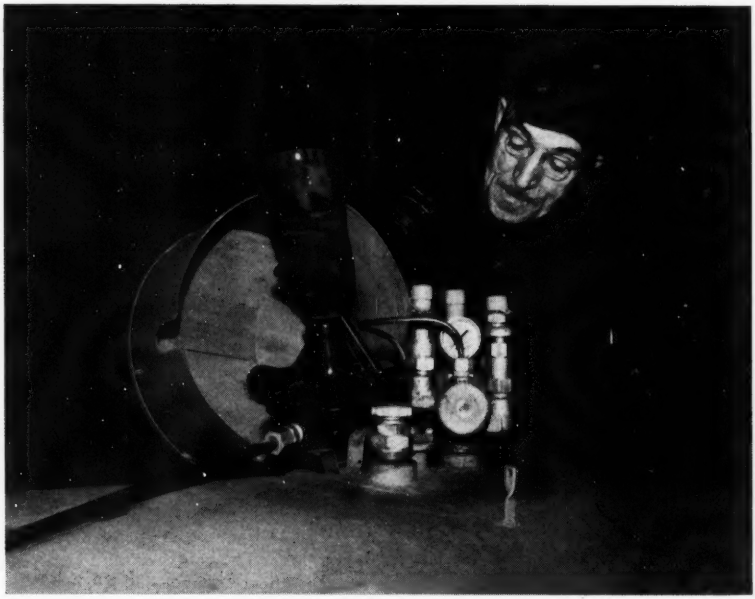
Appointment of B. M. DeBee as district manager, Eastern division of **Detroit-Michigan Stove Co.,** is announced by John C. Pankow, director of sales.

Mr. DeBee will work under C. M. Jewell, Eastern divisional sales manager.

Ansul Chemical Co., manufacturer of dry chemical fire extinguishers, has expanded its sales network by opening a new district office in Knoxville, Tenn.

Joseph F. Ziemann, 10-year veteran in the fire protection field, and Troverse F. Schmidt, former fire prevention engineer for Air Transport Command, will direct the work of the new office.

Creation of a marketing division to consolidate all sales, advertising and promotional activities of **The Coleman Co., Inc.,** is announced by Sheldon



A spring hat for a gas tank. The "milliner" is John Albine of the U. S Steel's National Tube plant at McKeesport, Pa. The "hood" will cover a pressure gauge, regulator, equalizer, and safety valves.

Coleman, executive vice president and general manager of the manufacturing firm.

R. W. Carney, for many years an officer of the firm and its sales manager, will head up the new division with the title of vice president in charge of marketing.

Reporting to him are C. L. Burrows, recently appointed national sales manager; A. W. Boyer, advertising manager, and C. B. Corbin, market research manager.

Mr. Burrows will direct a staff of four assistant national sales managers.

Mr. Coleman says that the Coleman branch office in Philadelphia is being closed. Key personnel are being transferred to the general offices in Wichita.

The company recently established a second branch house in California at San Francisco. L. G. Ingram is manager of the San Francisco house, located at 195 Rhode Island.

The Los Angeles branch will continue under the management of F. R. Stephens.

In addition to houses in San Francisco and Los Angeles, sales offices are located in Toronto, Canada; London, England; and Honolulu, T. H. Factories are in Wichita, Toronto and LaPorte, Ind.

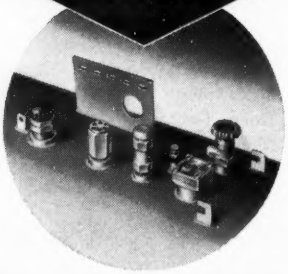
Sahara Heaters, Inc., which was located formerly at Berkley, Mich., has moved its plant to 20570 W. Eight Mile Road, Detroit.

At the same time the company has been reorganized and Charles E.

The Hall-Hart Co., Burbank, Calif., southern California distributors of Chambers gas ranges, decided to do something about the increasing need for selling merchandise instead of waiting for customers to come in and buy. So they equipped this station wagon and trailer with a tank of LP-Gas and a range and started Salesman Ralph Miller out to call on LP-Gas distributors and make demonstrations for them to their domestic prospects.

BASALT ENGINEERED
PROPANE
SYSTEMS

Convenient controls please users, save YOU money!



● All valves, fittings, including lifting lug and connections are now conveniently *on top* and under hinged cover of Basalt Propane Storage Systems. This means faster, easier servicing by your drivers ...saves their time...saves money for you! Added customer satisfaction is yours, too...with Basalt Engineered Propane Systems.

Basalt ROCK CO., INC. STEEL PRODUCTS

For full information write:
Steel Products Div.,
BASALT ROCK CO., INC.,
Napa, California

Fields elected president and general manager.

The company's new 1949 model is now in production. Improvements include Baso safety pilots, electrically operated solenoid valves, and two 350 cfm fans, horizontally mounted, instead of the one used in the former model.

Closely following his appointment as vice president in charge of sales of the **Estate Stove Co.,** Cecil M. Dunn has been named general manager of the Estate Heatrola Division, Noma Electric Corp., Hamilton, Ohio. This announcement has been made by John A. Seubert who, at the same time, has announced his retirement from his positions of executive vice president of the sales company and vice president and general manager of the manufacturing division.

CECIL M. DUNN

Mr. Seubert is remaining with the Estate organization for a sufficient length of time to assist Mr. Dunn in the additional phases of the operation which are now coming under his jurisdiction.

The Estate Stove Co. was recently organized as a sales company, merchandising products of the Estate Heatrola division, both remaining wholly owned subsidiaries of Noma Electric Corp.

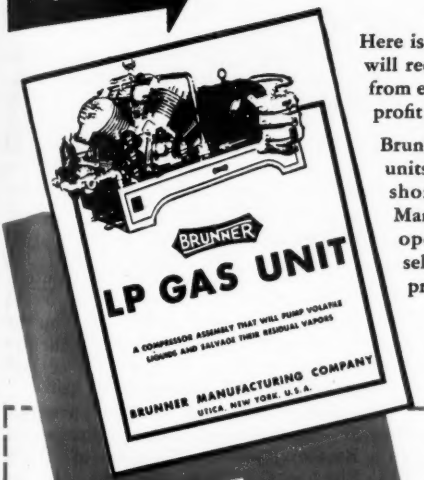
Mr. Dunn has been with the Estate organization for 20 years and has acted as district manager, sales promotion manager, general sales man-

500 TO 1000 LBS. OF LP GAS SAVED from every car unloaded

...if you use

BRUNNER SINCE 1904

TANK UNLOADING UNITS


BRUNNER
LP GAS UNIT
A COMPRESSOR ASSEMBLY THAT WILL PUMP VOLATILE LIQUIDS AND SALVAGE THEIR RESIDUAL VAPORS
BRUNNER MANUFACTURING COMPANY
UTICA, NEW YORK, U.S.A.

Here is a compressor-pump assembly that will recover *more* of the liquid and vapor from every tank car... producing an *extra* profit that would otherwise be lost.

Brunner liquid petroleum gas transfer units actually pay for themselves in a short time from this *extra recovery.* Many years of dependable economical operation is another bonus in the selection of Brunner. Hundreds in use prove these facts. Use the coupon.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

FREE: This 20 page Guide to better LP Gas Transfer

Diagrams on piping, wiring and bottling plus technical data required by every operator. Already used to advantage by hundreds. Send for it.

Name_____

Address_____ City and State_____

EXPAND YOUR INCOME WITH A CULLIGAN FRANCHISE

Your present bottled gas customers need Culligan Soft Water Service. Turn your L-P gas service area into a real money-maker with an *exclusive* Culligan franchise. Cash in on these 5 profit opportunities in water conditioning:

1. Supply *Culligan Soft Water Service* to hard water homes in your area. You own the equipment — your customers pay for the service alone.
2. *Sell Culligan Softeners* outright. Every sale means extra profits.
3. Sell "*Sureclor*" Water Chlorinating units—purify well water.
4. Provide *Culligan Rust Control* Service—clears up "red water," controls destructive corrosion.
5. Handle *profitable "plus" items* in the Culligan line.

More than 850 Culligan Dealers now serve over 2,000 communities. WRITE today for complete information on this opportunity to expand your profits.

Copr. 1949 Culligan Zeolite Co.

CULLIGAN *soft water* SERVICE

CULLIGAN ZEOLITE COMPANY
1851 Walter Avenue • Northbrook, Illinois

ager and as director of sales and advertising prior to his recent advancement.

GORDON HENTZ

One of the first appointments to be made is that of Gordon Hentz as general sales manager of the company, in which position he will supervise the establishment of warehouse and service facilities in Philadelphia, Washington, D. C., and other key cities.

Previously, Mr. Hentz served as division manager of the New England and New York divisions of Estate.

Appointment of Mifflin F. (Army) Armstrong as district representative in the Philadelphia area, is announced by Mr. Dunn.

Prior to this appointment, Mr. Armstrong was associated for four years with Philadelphia Distributors.

One of Mr. Armstrong's first duties will be to assist in setting up an Estate warehouse and service facility in Philadelphia. Similar service will be offered in Washington, D.C.

As another step in their program of expansion and streamlining, the Estate Heatrola Division of Noma Electric Corp. has just put into operation the new 500 ton hydraulic press pictured here.

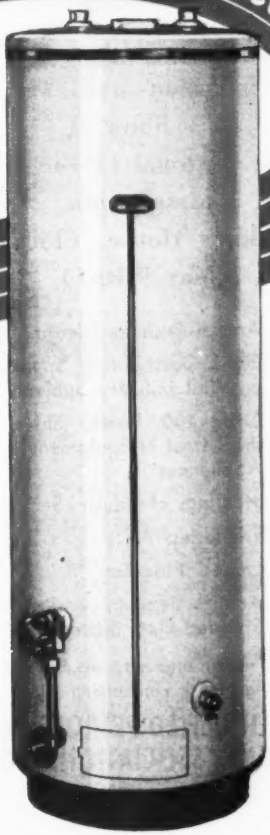
This press weighs 90 tons and stands 27 feet from the floor. The base of the press is 13 feet below floor level and is mounted on a 24 inch reinforced concrete footing.

The installation of this press, which is capable of handling a sheet 90 inches by 48 inches, enables the Estate Heatrola Division to produce

you'll hear them sing

the praises of

WILSHIRE *heaters*



More dealers are sold on Wilshire Water Heaters every day. They like their eye-arresting good looks and the quality that adds up to customer hot water satisfaction. They have seen the fast reheating performance and the powerful economical burner and automatic control.

They appreciate the perfection of engineering and assembly which make installation and adjustment a cinch. They have heard their customer sing, "I sure like my Wilshire Heater." Dealers are making money on Wilshire Heaters.

Southern *Heater* **CORPORATION**

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LIQUEFIED PETROLEUM
LPGA

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Convention and Trade Show
National LP-Gas Association
Palmer House, Chicago
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- ★ Eight Outstanding Speakers on Vital Industry Subjects
- ★ Over 100 Booths Showing the Latest in Equipment and Appliances
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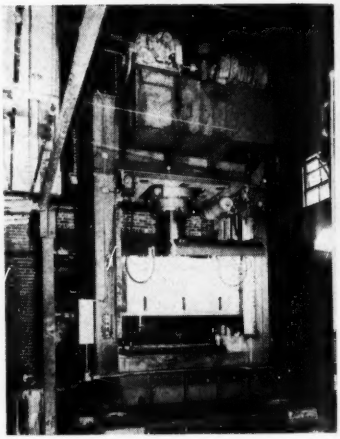
All under one roof in America's greatest convention city

LIQUEFIED PETROLEUM GAS ASSOCIATION, INC.
11 South LaSalle Street
Chicago 3, Illinois



all metal stampings within their own plant. It was secured primarily for use in producing the one-piece tops used on Estate ranges.

Several changes in the sales offices have been made by the **Pressed Steel Tank Co.**, Milwaukee, according to an announcement by Norman Evans, vice president in charge of sales.

EDWARD ELLIOTT

Edward Elliott, district manager of the Cleveland office for three years, is new manager of the New York district. He has been with Pressed Steel since his graduation from Purdue University, in 1937, except for four years active duty with the army.

T. V. Montgomery has moved from the New York office to Cleveland as

R. H. DIECKELMAN

T.V. MONTGOMERY

district manager of that territory. He has been with the company since 1939, when he graduated from the University of Texas.

Assistant manager of the New York office is R. H. Dieckelman, who has moved from the Milwaukee office to work with Mr. Elliott. Mr. Dieckelman, graduate of Notre Dame University and the Harvard School of Business, served the company first in the engineering department before his transfer to the sales department in 1945.

Caloric Stove Corp., manufacturer of gas ranges, has named William R. McKnight as sales representative in North Carolina and South Carolina.

He is associated with L. H. Ernst, Caloric's Southeastern division sales manager, Reynolds Bldg., Winston-Salem, North Carolina.

Caloric also announces the recent appointment of I. N. Hamilton, of South Pittsburgh, as district sales representative for Tennessee.

Dealers in Tennessee will be supplied from Caloric's Nashville, Tenn., warehouse.

Now it's SUPERMATIC

Model 222-D

The BIGGEST Little Range Ever Built!

Designed Particularly for LPG

featuring

PYROFLO NO-TIP SEMI-SOLID GRATES
BEAUTIFUL CHROMED COOK TOP
EXTRA LARGE OVEN AND BROILER
ELECTRIC OVEN LIGHT

and your choice of

GLAMOROUS RED, YELLOW, GREEN, BLUE or WHITE
HEAVY PORCELAIN FINISHES

Write today for free descriptive catalog

Made by

SUPERMATIC PRODUCTS CORPORATION

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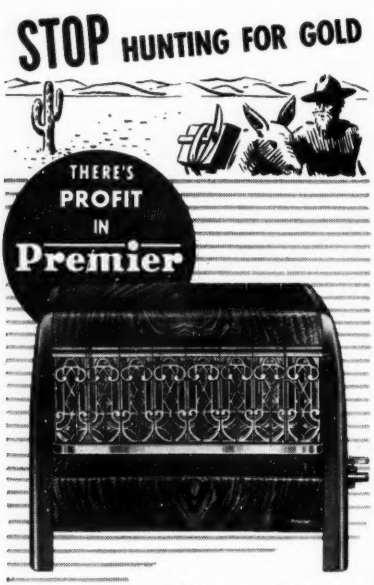

A.G.A. approved for use with L.P., natural and manufactured gases.

MODEL 1028—32,000 B.T.U.

Premier Radiant Gas Heaters—from 16,000 B.T.U. to 32,000 B.T.U. ratings—keep your customers warm and your cash register happy! There's real profit in popular, fast-selling Premier Gas Heaters—Quality Since 1912.

Premier
STOVE COMPANY
100 South Sixteenth Street
Belleville, Illinois

Formation of **Affiliated Gas Equipment, Inc.**, with headquarters in Cleveland, has been announced by Lyle C. Harvey, president and general manager of the new corporation. The new organization represents the combining in a single unit of three well known manufacturing companies with a full line of products in every phase of heating, water heating and year 'round air conditioning fields.

LYLE HARVEY

This organization brings together, under single management, three pioneering firms in the gas heating and allied fields, all of which were previously subsidiaries of Dresser Industries, Inc. These are the Bryant Heater Co., of Cleveland, the Day & Night Manufacturing Co., of Monrovia, Calif., and the Payne Furnace Co., of Beverly Hills, Calif.

Five major producing plants are merged in this single organization and will manufacture a complete line of gas-fired equipment for both heating and water heating in the residential, commercial and industrial markets. Two of the Bryant Heater division plants are located in Cleveland, with a third in Tyler, Texas. The Day & Night division property is in Monrovia, Calif., while the Payne Furnace division plant is in Beverly Hills, Calif.

Among the nationally distributed products to be produced by the Bryant division are included boilers, furnaces, unit heaters, conversion burners, water heaters, circulating heaters and radiant-panel wall heaters, as well as industrial gas-burning

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GAS EQUIPMENT SUPPLY CO.

GAS EQUIPMENT SUPPLY CO.
127 ELLIS ST. N. E. ATLANTA, GA.

Standard Rates Apply to U. S. & Possessions, Canada, Mexico Cuba, South and Central American Countries.
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Superseal

GAS
HEATER
CONNECTORS

UNDERWRITERS' APPROVED for all gases. *Heavy, hex, steel* fittings parkerized for corrosion protection, combined with special alloy aluminum tubing with *.049" wall thickness.* A connector built to "take it"!

EASY DOES IT. The long 10° tapered cone of a Superseal fitting assures permanently gas-tight seal. There's no need to be "brutal" when tightening the nut, but you need not fear shearing the tubing or damaging the fitting. Tubing can be bent sharply close to the fitting.

COMPETITIVELY PRICED even though "the best". Available in any combination of fittings as required. Brass shutoff cocks with Superseal cone also available. Write for complete description.

Superseal

DIVISION

COLUMBIA MALLEABLE
CASTINGS CORPORATION

COLUMBIA, PA.

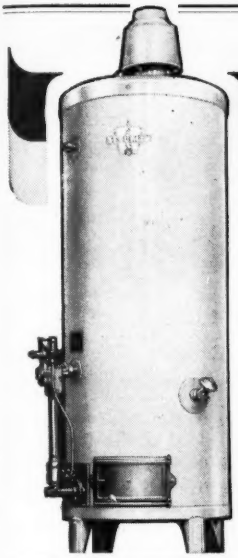
equipment. The Day & Night division will continue to produce gas-fired water heaters, water coolers, space heaters, the gas-fired panel-radiant ray wall heater and an entirely new product—an overhead radiant space heater.

Among the Payne Furnace division's products are included warm-air furnaces, room heaters, a new evaporative cooler for residential, commercial and industrial use, a new forced-air panel heater unit, and a completely new line of central plant gas-fired furnaces. Thus under a single management is being produced practically every type of gas-burning equipment for heating, water heating and air conditioning units for winter and summer.

President Lyle Harvey, who is general manager and a director of AGE, is also general manager of the Bryant Heater division. He is a past director and executive committee member of the American Gas Assn., and a director and past president of the Gas Appliance Manufacturers Assn.

Associated with Mr. Harvey are other names of importance in the gas industry and heating field. Philip W. Scott, formerly secretary-treasurer of the Bryant Heater Co., occupies a similar post with the new AGE. W. J. Bailey, Jr., is also a vice president and director of AGE while serving as general manager of the Day & Night division. General Manager E. L. Payne, of the Payne Furnace division, is a vice president and director of AGE.

A. W. Ambrose, president of Cities Service Oil Co., Bartlesville, has named G. R. Preston manager of its economics department. Mr. Preston will continue to head up the company's program for acquiring producing properties.



Outstanding

Quality...Styling...Value

Greater grows the demand for SECURITY Automatic Hot Water Heaters. More and more buyers seek the smart appearance, dependable performance, superior workmanship for which SECURITY is famed. Thousands of users are amazed at the efficiency, economy and long life of these gleaming Automatic Water Heaters. Operate on all fuel gases. Now is the time to look to SECURITY . . . for leadership and for sales!

SECURITY

GAS FIRED SGP PRODUCTS

The "LONG-LIFE" LINE

SECURITY MANUFACTURING CO.
KANSAS CITY 3, MO.

Butane & Propane

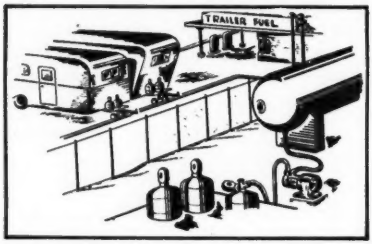
Producers of high quality
Liquefied Petroleum Gases Since 1931
Wholesale Only

THE CARTER OIL COMPANY
TULSA, OKLAHOMA

NEW USES

New types of locations for dispensing LPG, almost equal the older, conventional ones, in the growing market for the new bottle filling pump recently introduced by Corken's, Inc., it is shown by analysis of early sales.

Nearly half of the pumps sold during the first three months went to completely new outlets, many of them representing installations where LPG



previously had not been used, according to Corken officials.

The pumps were sold for such varied operations as road building, ditch digging, and strip mining. More conventional installations included small cylinder filling plants, trailer bottle filling stations, and roadside fueling stations with Adel dispensers.

The new pump, known as the Model 10, is equipped with ¾ HP single phase motor, with starter. It is capable of delivering LPG at high pressure, even under adverse conditions. It lists at just $175.00.

Equipment dealers and distributors are showing considerable interest and activity in sales, according to Corken's.

For complete information write or phone
CORKEN'S, INC.
206 East Grand
Oklahoma City, Okla.

J. T. BRADLEY III

J. W. SCHRIEVER Jr.

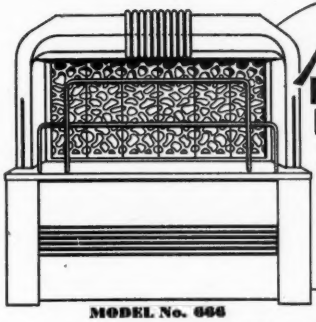
A new district sales office has been opened at Madison, Wis., by the liquefied petroleum gas division of **Warren Petroleum Corp.**, in order to facilitate handling of the sizeable increase in business experienced by that corporation in the North Central states in the past three years.

J. T. Bradley, formerly of the Tulsa headquarters staff, has been promoted to district sales manager and placed in charge of the new office in the Tenney building. J. W. Schriever, Jr., also has been transferred from Tulsa to Madison as district sales representative.

Hal Singleton, sales manager of **Grayson Controls Division** of the Robertshaw-Fulton Controls Co., Lynwood, Calif., announces the addition of L. A. Sidwell to the sales department.

For the past two years Mr. Sidwell has served as assistant production manager of the Grayson Division and his new duties will evolve around the coordinating of customers' orders with factory scheduling.

Republic Heater Corp., water heater manufacturers, located in Huntington Park, Calif., was recently purchased by M. J. "Milt" Stevens, well-known



MODEL No. 666

A *New* RADIANT MODEL

BRILLIANT FIRE GAS HEATERS

A distinctively modern creation in Featherweb Ivory and chrome. Deep recessed backwall directs maximum heat rays. High efficiency burner, non-clog ports, dial type regulator are features. A 24,000 b.t.u. heat-maker measuring 22" wide (20" at bak) 10" deep and 20" high.

For All Gases

WRITE FOR CATALOG NO. 49

BRILLIANT FIRE GAS HEATERS

THE OHIO FOUNDRY & MANUFACTURING CO.

Engineers · Manufacturers · Designers

STEUBENVILLE · OHIO · U.S.A.

ESTABLISHED 1846

. . . . with Pilot Tapping

A. G. A. Approved

for LP Gas

on Appliances and Equipment

This new Hays Manual Main Gas Control Valve for automatic gas appliances is made in a full line of sizes from ½" to 2". It comes in two styles, for female iron pipe or union outlet. It has ⅛" pilot tapping for right hand or left hand connection; or can be supplied with double tapping, for connection on either side.

This new valve has all the quality features which distinguish the entire Hays line of bronze fittings. Send us your requirements for complete information and specifications. Write for Folder 107

HAYS MANUFACTURING CO., ERIE, PA.

Liquefied Petroleum Gas

Cities Service Oil Co.

•

A DEPENDABLE SOURCE
UNIFORM PRODUCTS
A CAPABLE SUPPLIER
TWENTY YEARS' EXPERIENCE

•

IN LP GAS ALSO
CITIES SERVICE
MEANS
GOOD SERVICE

•

CITIES SERVICE OIL CO. (Del.)

•

BARTLESVILLE, OKLA.
CHICAGO, ILL.

Other Sales Offices
Cleveland Kansas City
St. Paul Toronto

M. J. STEVENS

figure in the gas appliance industry.

Mr. Stevens was former owner of Vermont Tool & Supply Co. He was connected with the Peoples Gas Light & Coke Co., Chicago, for several years before he came to Los Angeles.

The purchase of the Republic Heater Corp. represents Mr. Stevens' re-entry into the field for which he is well fitted by background and training. The firm will remain a member of all gas industry organizations.

Miss Opal Mitchell, formerly with Rheem Manufacturing Co. and Pioneer Manufacturing Co., has been appointed vice president in charge of national sales. Mrs. L. Reed, former owner, will assist in an advisory capacity. Whitney Reed, son of Republic's founder, will remain in charge of local sales.

A. W. Conley, president of the **Coroaire Heater Corp.** and its wholly owned subsidiary Hot Boy Inc., has recently announced the promotion of T. G. Leonard to the position of assistant sales manager.

Mr. Leonard has been associated with Coroaire Heater Corporation since his release from the A.A.F. three years ago, in the sales and advertising department.

Anchor Petroleum Co., Tulsa, has moved its Los Angeles offices from 215 West 5th St. to the new General Petroleum Bldg., 612 S. Flower St., it is announced by O. L. Ely, manager of the Los Angeles offices.